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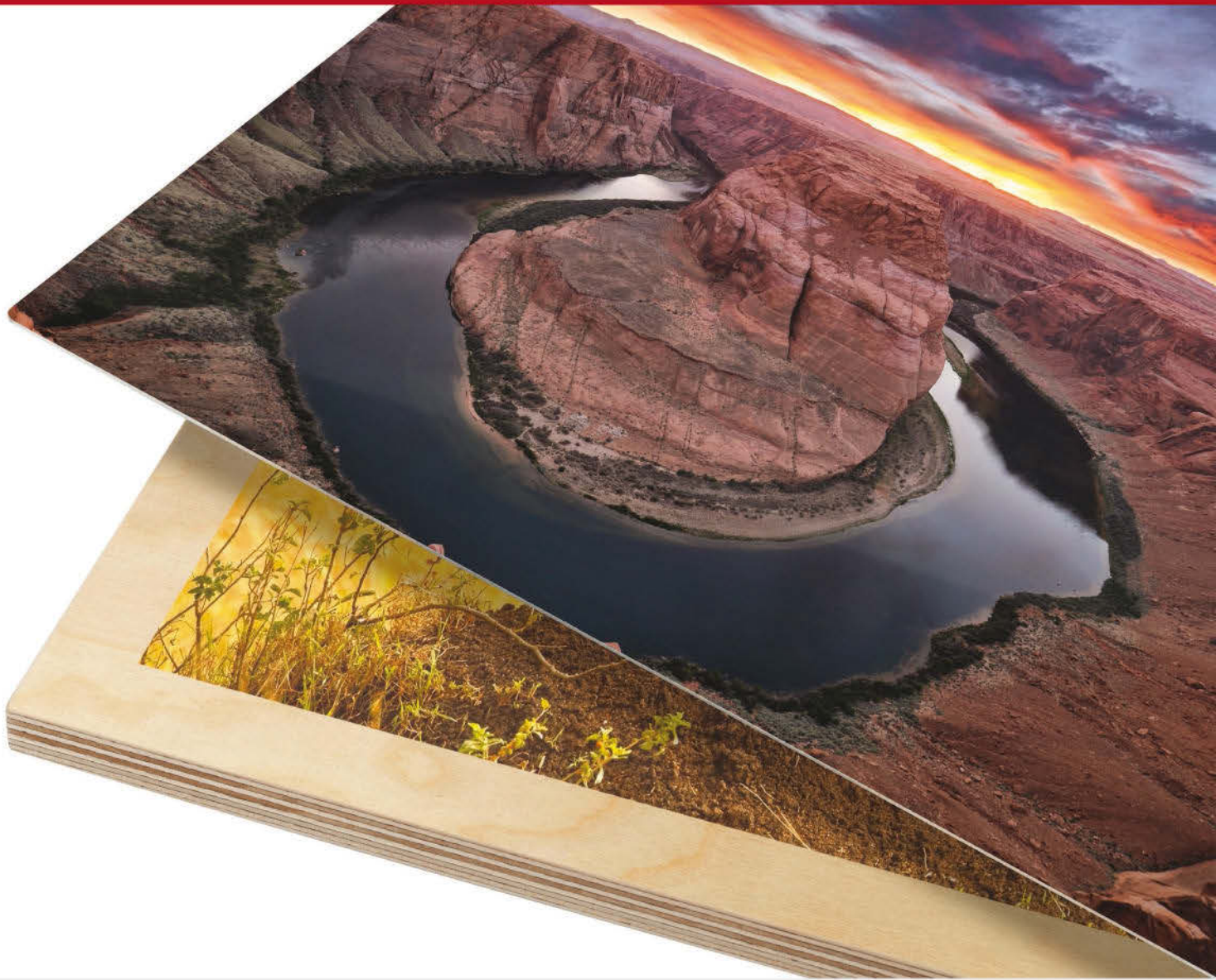
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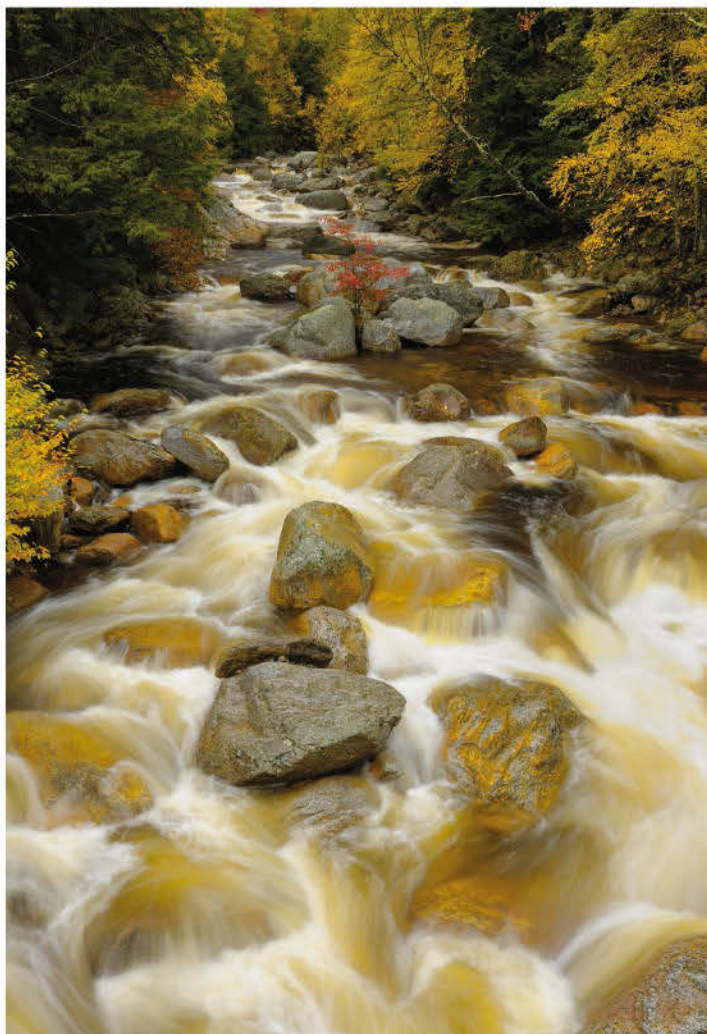
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SHUTTERBUG



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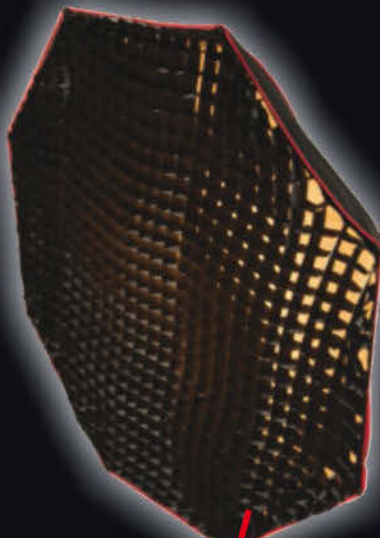
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EXPERT ADVICE FROM PHOTOGRAPHY PROS

We like to think that we gather together some of the most astute photography minds for our annual *Expert Guide* but really it's no exaggeration. While going over the stories for this edition, I was struck by the diversity of the photo tips and how-to pieces offered. There's truly something for every type of photographer here and the useful advice and examples from our team of photographer/writers is the best in the business.

Here are just a handful of the helpful stories in this edition of the *Expert Guide*. Does everyone tell you that you should use Raw to get the most out of your images but you never fully understood why? Well, Chuck Gloman explains it plainly and simply in his story "Why You Should Shoot in Raw." Chuck's a good one to talk because, for a long time, he had been a JPEG shooter until he saw the light and realized he was losing many details in his photos due to compression.

We know there are a lot of Macro shooters who read the *Expert Guide* but have you ever thought of using a Macro lens to shoot portraits? Joe Farace explains how it's done in "How to Use a Macro Lens for Portraits" and shows how this type of close-up glass is not just for capturing flowers and bugs.

Photographing waterfalls is extremely popular among Shutterbugs but are you tired of your shots all looking the same? Chris Tennant goes through "The Basics (& Beyond) on Photographing Waterfalls," offering a complete rundown of the gear and techniques you'll need to capture waterfall photos that make a splash. Since by the time you're reading this, autumn will be approaching Stan Trzoniec offers a great tips piece on "Capturing the Colors of Fall."

Because properly editing your photos can be almost as important as capturing them, Jeff Howe has a supremely helpful story about the importance of cropping

photos to unleash an image's true potential. Or as Jeff puts it, "When in Doubt, Crop it Out!"

And that's just a handful of what you'll find in the *Expert Guide 2015*. Don't forget, we also have a vast, 15+ year archive of photography tips and how-to stories on our website Shutterbug.com. Along with reviews of recent cameras and the latest imaging news, you'll find tips on outdoor, travel, sports and family photography as well as traditional and digital darkroom techniques.

But enough of my blather. Turn the page, start reading and then get out there and go shooting!



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BY THE DAWN'S EARLY LIGHT

Finding photographic inspiration in the first rays of daylight

Text and photos by JEFF WIGNALL



[1] Mouth of the Housatonic River. Often I'll find a dawn scene that I think has potential, frame it and wait for something interesting to happen. In this case, two things happened just as the sun was rising: a sailboat entered the river and a flock of geese lined up on the shore. Exposure at ISO 200 was 1/100 second at f/8 with a Nikkor 70-300mm zoom lens at 300mm (450mm equivalent).

[2] Sunrise. I had nearly given up on seeing a sunrise this morning, then the clouds suddenly parted enough to reveal the big red ball of the sun. Using a Nikkor 300mm lens (450mm equivalent) magnified the size of the sun and exposing for the bright areas tossed the dark foreground into pure silhouette. Exposed at ISO 250 for 1/125 second at f/5.6.

[3] Sailing Upriver. The boats are heading up river and it's unusual to see them moving in that direction at dawn because it means they're heading away from open water and seeking shelter in the river. This boat had been on an overnight sail and was either arriving home or coming in to rest for the day. I shot this scene with a 70-300mm Nikkor zoom at 250mm (375mm equivalent) and exposure at ISO 200 was 1/250 second at f/8. The

About a year ago I began having a growing dissatisfaction with my personal photography. I realized that one reason I wasn't producing as many photos as I used to was that I was sleeping away some of the best hours of daylight. When I travel, I make an effort to be up at dawn to search out new subjects and locales because if you're going to spend all of that energy (and money) to get someplace special, it's a waste to sleep those hours away. But when it came to the photos I was shooting on my home turf, I realized that I was working a lot in the late afternoon and at sunset. Almost completely ignoring the earliest hours of the day and losing great photo opportunities.

I realized that the only way to break new ground was to push myself beyond my normal comfort zone in terms of shooting schedule and subjects. So I decided to make an effort to be out in the field well before dawn to shoot in both pre-dawn light and around sunrise. I wasn't going to bed earlier and setting an alarm clock because I tend to be a night owl. I was

just staying up through the night and an hour before sunrise I'd head out to shoot.

In order to create something that felt more like a personal project I decided to aim my efforts at a single subject. Since I live just a stone's skip away from the mouth of the Housatonic River in Connecticut [1], I chose that as my destination and primary subject.

For a few months (2-3 days a week) I left home in darkness and headed down to the banks of the river. Most of the river is developed with marinas, condos and factories, but because it's a substantial river that travels hundreds of miles to reach the Long Island Sound, there is still an untamed charm to it. There is a surprising amount of activity on and beside the river at these hours, human and otherwise [2].

Other Hours, Other Worlds

One of the things you realize when exploring at such unusual hours is that those are normal business hours for a lot of people. For the fisherman and oystermen loading up the boats at three or four in the morning and heading out to the fishing grounds was completely normal—it's their rush hour [3]. It was inspiring, both visually and creatively, to enter their world with a camera.

As most wildlife photographers know, dawn is one of the most active times for wildlife, particularly shore birds. Each morning I saw great blue heron, yellow-crown night heron, black-crown night heron, mute swans, red fox and muskrats in greater numbers than I'd seen at any other hour. Because the shore birds are busy feeding, they paid almost no attention to me. I was able to approach a





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yellow crown night heron within about 10 feet before he really took note of me. That meant that I could nearly fill the frame with a 300mm lens. The mute swans that are common along the river gather much closer to the shore at dawn and I was able to photograph them from just a few feet away with ease [4], [5].

Scout By Daylight, Arrive In Darkness

One thing that will increase your productivity with a dawn shoot is to scout the areas in daylight a few times. Because the light changes so rapidly once the sun begins to rise, it's impossible to search for subjects (or interesting compositions) and stay on top of the lighting changes at the same time. If you know the lay of the land and have a shot or two pre-visualized before you arrive, you at least have a running start [6], [7].

You can never predict what will happen and you probably wouldn't want to be too locked into certain preconceived ideas. But you will get a much higher percentage of good shots if you know what activities take place in that location and what some of your compositional options might be. In the city, if you know when the farmer's markets are setting up in a local park you can be there to capture it. I knew that there would be fishing boats heading out to the Long Island Sound from up river and I was expecting them to sail into the frame as I shot. I also took note of what time they headed out and how fast they were moving. I also got to know the tide patterns

quite well (I picked up a tide chart at a local bait shop one morning and that helped a lot).

It's important to arrive at any destination in total darkness because some of the prettiest light occurs before the sun has pierced the horizon. Sky colors change so quickly in the pre-dawn that just being there and having the camera ready is half the game. You'll also find that the days before and after big storms have some of the most interesting cloud patterns.

The Light Of Dawn

Perhaps the most interesting aspect of being out between darkness and early morning is that the light goes through three distinct phases in a relatively short period of time:

PREDAWN: When the sky is getting brighter but before the sun has hit the horizon.

SUNRISE: When the sun is just starting to break through the horizon.

GOLDEN HOUR: When the sun has fully entered the morning sky.

Each of these distinct daylight periods has its own challenges, both in terms of subjects and exposure, and knowing what to expect will enable you to concentrate more on your subjects than adjusting the camera settings. I almost always shoot in Raw but I still monitor (and adjust) the ISO and white balance manually so that my Raw files are recording the scene that actually existed. Here are the three lighting phases and some exposure suggestions for each:

PREDAWN TIPS: Before the sun has actu-

morning mist in the background has a tendency to fool the meter, so I also used +0.67 stops of exposure compensation.

[4] Yellow-Crowned Night Heron.

Wildlife is active in the first hour of daylight because it's their busiest feeding time. I was able to approach this yellow-crowned night heron to within about 20 feet because it was so intent on feeding that it paid no attention to me. In less than 20 minutes I was able to shoot more than 100 photos of it. By metering and exposing for the bright background I was able to turn the bird into a silhouette. Shot with a 300mm Nikkor lens (450mm equivalent) and exposure was 1/60 second at f/8, at ISO 640.

[5] Swan Family. Mute swans are a fairly common site along this portion of the river and they spend a lot of time close to shore, which makes them easy wildlife subjects to capture. I shot this adult and two cygnets in the orange glow of dawn. Shot with a 70-300mm Nikkor zoom at 220mm (320mm equivalent) and exposed for 1/60 second at ISO 400.

[6] Tidal Flat at Dawn. One thing I noticed in shooting a lot of sunrises is that I rarely included the sun itself in the photos—



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largely because the sun tends to overwhelm the scene. In this case, a cloudbank and soft overcast helped temper the brightness a bit. Exposure was 1/250 second at f/8 at ISO 200. I used +0.67 stops of exposure compensation because I was metering with a matrix meter directly into the sun. Shot with an 18-70mm zoom.

[7] Backlit Swan. Once the sun is fairly high in the sky, I tend to pack up the gear and head home, but a strong morning sun can create some nice backlighting opportunities. The white feathers of swans are a pretty subject with backlighting, but getting a good exposure can be a tricky. I shot this in Raw, knowing that I could fix the exposure and white balance after the fact, but I also used +1 stop of exposure compensation to help keep the shot from underexposing too much. Shot with a 70-300mm Nikkon zoom at 240mm (360mm equivalent) and exposed for 1/320 second at f/8, at ISO 400.

ally broken the horizon, the light is typically very cool—ranging from a silvery blue to purplish in color and is dependent on the weather and cloud patterns. At this time of day the world is reduced to shapes, patterns of light and dark and many subjects are cast into interesting silhouettes. The shot of the heron stalking on the shore [4], has a very bluish pre-dawn coloration that disappeared almost immediately once the sun rose. While I often see other photographers working around dawn, I almost never see any in this predawn period and yet it's a quiet and very pretty time of day.

You'll have to bump up the ISO because the light levels are extremely low. I start at around ISO 1000 and then lower the speed as the daylight increases. I always work on a tripod, so shutter speed isn't that big a concern (unless I'm photographing a shorebird and need to stop the motion), but in order to get any depth-of-field, you have to stop the lens down a bit and that requires a higher ISO when the light is so low. I set a neutral white balance because even a slight warming (or cooling) can change the delicate colors and tones.



SUNRISE TIPS: One of the key things for photographing the sunrise is to know (roughly) where it will rise—particularly if you want to include the sun itself in your images. But it's also important to know what direction the lighting will be falling on the surrounding landscape [8]. As the sun gets closer to the horizon you can see where it's going to pop up, but by that time its relative motion accelerates and you are stuck where you are. By the time you change location the sun will be up and you'll find yourself jogging, tripod slung over your shoulder, looking for the best shot [9], [10], [11], and [12].

For many years when I traveled to unfamiliar places, I carried an inexpensive pocket compass just to get my bearings. Today you can get any number of free (or cheap) compass apps for your smartphone that provide more information (<http://joyofandroid.com/compass-app-for-android/>).

In terms of exposure and lighting, dawn is probably the most challenging because as the sun rises, the light goes from a soft glow to a very intense directional lighting quickly. Exposure in situations like this changes second-to-second and you have no option but to trust the auto-exposure system and shoot in Raw so that you can adjust the exposure after the fact.

GOLDEN HOUR TIPS: My favorite time to shoot early in the morning is in the hour (or so) after the sun has risen. The lighting during this brief period is typically very warm (often golden in tone) and can turn a mundane landscape into an amazing scene. None of the shots here were falsely exaggerated in color. Because the sun's brightness and color has stabilized once it's clear of the horizon, exposure and white balance are much simpler to control. I often reset the





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white balance a few minutes after sunrise to fine-tune the color balance. I never rely on generic settings (such as “cloudy day”) because I prefer to use my Nikon body’s white balance graph to make precise adjustments. Most cameras allow you to use an advanced color picker to modify generic settings. Read your camera’s manual for more on fine-tuning white balance on the fly.

The Raw Advantage

I almost always shoot in Raw format, though I also capture JPEGs simultaneously. By capturing both at the same time, I can use the JPEGs for a quick look at each image and then use the Nikon NEF files to create my final images. Capturing both takes up a lot of card and drive space but cards and drives are cheap and capturing both is a good idea, if your camera has that ability.

I consider Raw an advantage with all subjects, it’s useful at dawn (and sunset) because you simply don’t have the time to refine the exposure and white balance settings when the light is changing so fast. If you are working in Photoshop, there is now a Camera Raw Filter option that allows you to make Raw corrections to files that weren’t originally captured in that format.

When I open an image in the Raw interface, the first three things I set are white balance, tint and exposure. After those settings are made it’s a matter of tweaking a few minor things before I open the images to do the final work in Photoshop. You can make many of the same corrections using Adobe Lightroom.

Shooting at dawn is a great way to add some variety and drama to your photos, and it will teach you how to adapt quickly to a changing lighting environment. ■

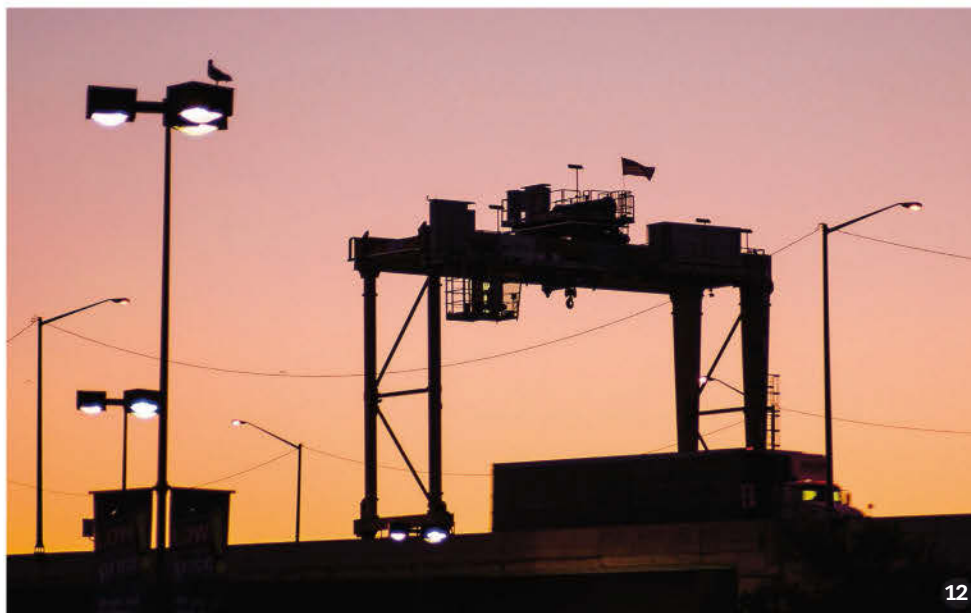
[8] Placing the Sun. Placing the sun exactly where you want it in the frame is a matter of knowing where the sun will rise and some luck. I had to walk about 50 feet as the sun rose to get the sun right next to the mast in this shot, but I already had a pretty good idea of where it would pop up. Exposure was 1/500 second at f/5.6 (with +1 compensation), at ISO 400.

[9] Silver Light. On heavily overcast days there is often a pretty silver color to the sky and water that gives the scene a different look than the warm tones of a sunrise. I shot this on a rainy morning well before dawn and used a custom white balance to exaggerate the coolness. Shot with a 70-300mm Nikkor at 210mm (315mm equivalent) and exposed for 1/25 second at f/8, at ISO 320.

[10] Into the Sun. At dawn and sunset, I try to avoid shooting directly into the sun (or its reflection) when possible, but sometimes it’s unavoidable. Your subject is right in front of you and the sun is directly behind your subject. To get an accurate exposure, try taking a reading with the sun (or its reflection) in the frame and then lock that reading. That’s how I exposed this scene. Even though I wanted a silhouette, I also used +1 stop of exposure compensation to be sure the brightness wasn’t fooling the meter into dimming the entire scene. Exposure was 1/640 second at f/7.1 at ISO 400.

[11] The Morning Commute. The town where I live has a small but active commercial shellfishing fleet and, if I get there early enough, I am always able to count on seeing boats heading out of the river toward Long Island Sound—it’s the morning commute for fishermen. I captured this boat heading out in the golden light of dawn at around 5:30 a.m. using a 70-300mm Nikkor lens at 145mm (217mm equivalent). Exposure was 1/1000 second at f/8 at ISO 640. Even though the light was relatively bright, I used the higher ISO so that I could use a shutter speed high enough to freeze the boat since it was passing parallel across the frame—the toughest direction of motion to freeze with any moving subject.

[12] Vampire Construction Crew. The crew that was working on a bridge on my way to the river was just wrapping up a night’s work as I drove past. The strange rigging takes on an otherworldly quality in the moments before dawn. Exposure was 1/25 second at f/4.2, ISO 200 with a 50mm f/1.8 Nikkor prime lens.



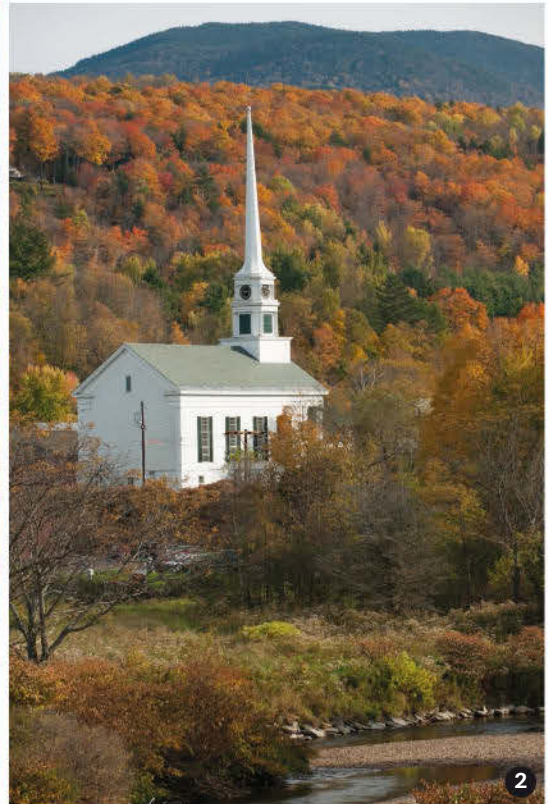
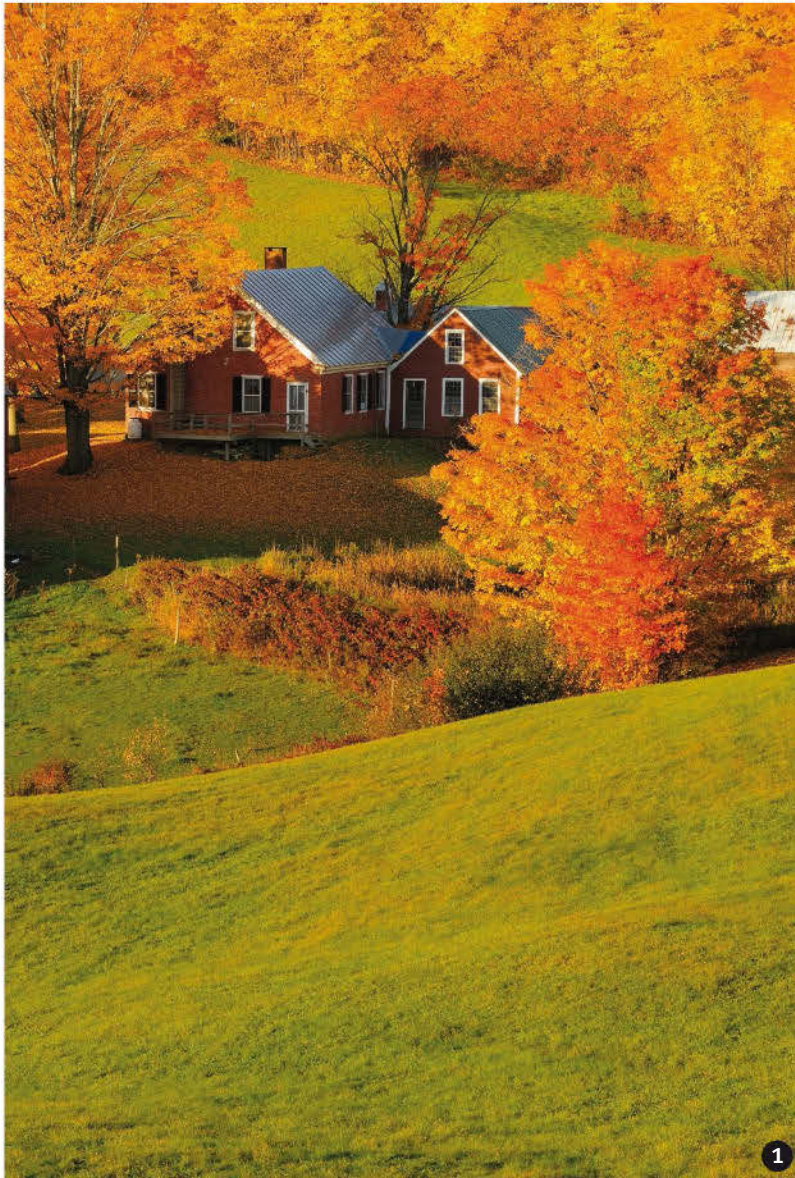
12



CAPTURING THE COLORS OF FALL

Use these techniques to shoot great autumn photos

Text and photos by STAN TRZONIEC



every turn.

New England is my home base and you simply can't beat the color up here. That's not to say, it's not as lush in other parts of the county since the Upper Peninsula in Michigan or the hills of West Virginia can be really beautiful. For painters, it's the season of contemplation, but for digital photographers (seeing that perfect image on your monitor for the first time) it is one of joy.

As a professional photographer, I'm always excited about traveling to work on new projects and while I love to travel locally, visions of other parts of the county often enter my mind. For my book "Autumn in the Country," I embarked upon a five-year project to reach the high places on my list that would give me the best color at the most predictable times. For those not as adventurous—or willing to deal with the weather, flights and missing the peak color—staying within 1000 miles of home is not really a bad idea. For me, this would be from the uppermost part of New England down to West Virginia and out to New York or Pennsylvania.

With the arrival of October, my spirits rise. Thoughts of cooler days, crisp mornings and impending fall color heighten my senses for additional photographic possibilities. For personal reasons, fall means the most to me. The bright colors and backlit trees all relate to a time of year that is photo rich at



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Travel by car is easy, I can carry more and arrive refreshed, ready to go and I never run out of places to see.

What To Take

While I did say you could carry more, keeping your equipment roster down to practical limits is a good idea especially if you travel by air. On the road in my Jeep, I have two bags, one is my Tamrac Expedition 9X—a large pack but



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because of its size, it is easier to carry since it distributes the weight over a larger part of your back—and the other is a Tamrac messenger bag. I can pack a few other lenses (that I might want to try to vary my routine) a charger, extra batteries and a spare camera Nikon D3s body—that stays in the Jeep, hidden from view.

To be honest I'm an equipment junkie, and I carry my primary Nikon D3x (set to Raw image capture) with an assortment of lenses (from wide to moderate telephoto), filters and other gear on my back. It is rare for me to bring a laptop; instead I load up on compact flash cards (as many as 16 per camera) and place them upside down in the holder when they are full.

Camera preferences are a matter of personal taste, so I will leave that up to you. For accessories, think landscape. With that in mind,

[1] Near Woodstock, Vermont this colorful (and very popular) farm has been documented hundreds, perhaps thousands of times. Called the Jenny Farm, early morning is the best time and when the color presents itself.

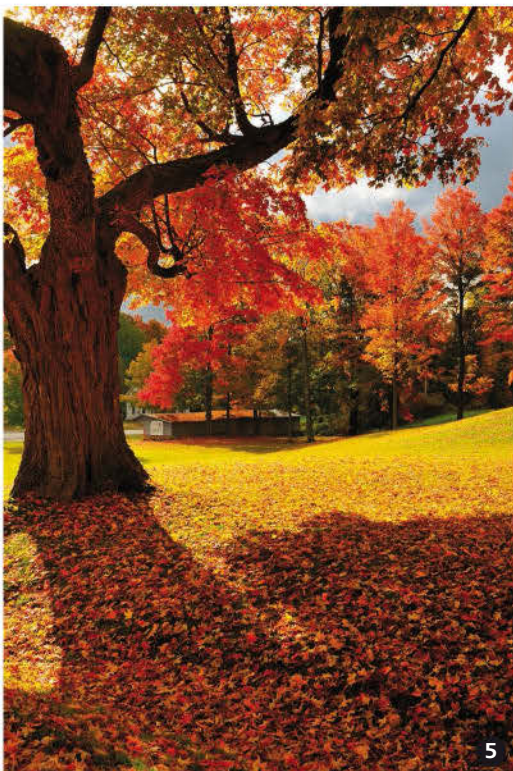
[2] There is a back road in Stowe, Vermont that gets you to this location and the church shown here. With the background ablaze with color, I can't think of a better place to be in autumn.

[3] One of my favorite villages is located in Grafton, Vermont where walking around with nothing more than a Nikon D3s and a lens (like a 24-120mm f/4 VR) will net you photos like this. At the shows, this is a very popular print with all the veterans. I call it, "Forever."

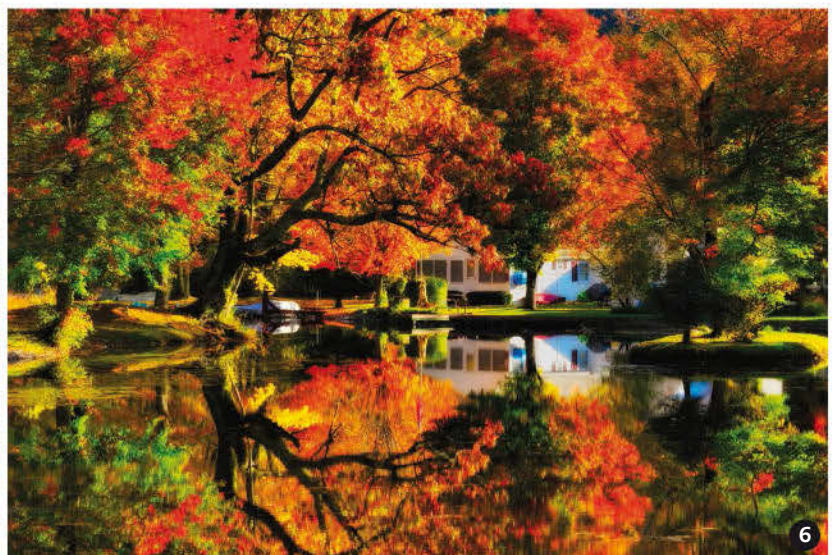
[4] When traveling in the fall I often take the back roads and a short run down this road in Pennsylvania offered a great photo of autumn at its prime.

[5] Some of the best pictures come from varied lighting conditions. Here backlighting on this scene not only gives depth to the background color, but the shadow adds interest.

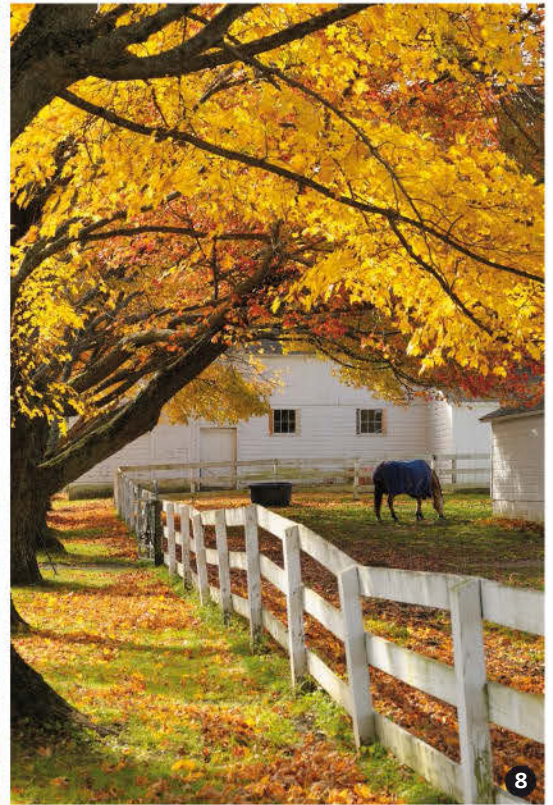
[6] On this morning in Vermont, the sun came out and the wind died down, resulting in an amazing photo that could double for a painting. All the right elements are there including the reflection, rich color and a house hidden in the background.



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I include graduated filters, a polarizer and a Singh-Ray Vari-ND filter (www.singh-ray.com) for those long exposures to add motion to rivers and streams. You can carry a macro lens, but a Canon 77mm 500D close-up lens does yeoman's duty on my Nikon 70-200mm f/2.8 lens. With this clever attachment, I can get right into the action at around 20 inches and (allowing for the zoom feature of the lens) I have a macro lens.

TIP: When purchasing lenses, it's nice if all of them have the same filter diameter. The majority of mine have a 77mm diameter, perfect for all of my filters and convenience in the field.

Finally, don't leave the cable release at home and a right angle finder comes in handy when photographing vignettes around the ground cover.

A good tripod is a necessity, as is an L-Bracket on your camera from a host of manufacturers. There is nothing worse than being miles from home and have your camera take a tumble. When it comes to tripods, I use the Gitzo brand (www.gitzo.us/tripods) in a variety of sizes/weights and a ball head. Your field tripod should be without a center post—especially if you are into lower than normal photos. With my Gitzo, I can collapse it down to where the bottom of the top plate is actually resting on the ground.

Photographing The Season

You can't control the weather but I always check the forecast and





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(weighing that against the peak of the season) I try and get out on windless, overcast days. For this, the Internet is a blessing. Overcast acts like a giant diffuser and you can obtain soft, delicate colors sometimes hard to do with the sun beating down on your subject.

With the aid of a polarizer, colors are brighter without those annoying cross-shadows on some subjects, but try to keep that lifeless sky out of your photos, as it adds nothing



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[7] When traveling, be sure to check the various places that offer scenes from the past for color. This is on the grounds of the Shaker Village near Pittsfield, MA. Here the color of the building compliments the tree and the ground cover nearby.

[8] In Pittsfield, MA I came across this tranquil farm with plenty of photo-rich opportunities. A knock on the door, permission granted and off I went.

[9] Not everything is at eye level. During the day, take a few minutes to look around for interesting ground cover. A good time for this is in the morning when droplets of water are on the leaves. A double element close-up lens is good for this, but a macro lens is even better.

[10] While in Minnesota, a photographer set up a blind just across from a small stream and this fox appeared. The color in the background makes this a perfect setting for wildlife.

[11] While it's good to get in close, sometimes another alternative presents itself. On a hike, the trail looped around this grand landscape in the Upper Peninsula ending at the top left. Setting up my tripod with the Nikon 24-120mm f/4, a polarizer and good lighting made this photo pop.

[12] In Colorado, this deserted homestead (with a rock face for a background) allows you take a gorgeous photo on an overcast day without a lifeless sky in the background.

to your hard work. Bright sun is not a handicap, especially when used creatively concerning the angle of the sun and where you can use back or side lighting to your advantage. If you combine the bright colors with a blue sky and fluffy clouds, you are in for a real treat.



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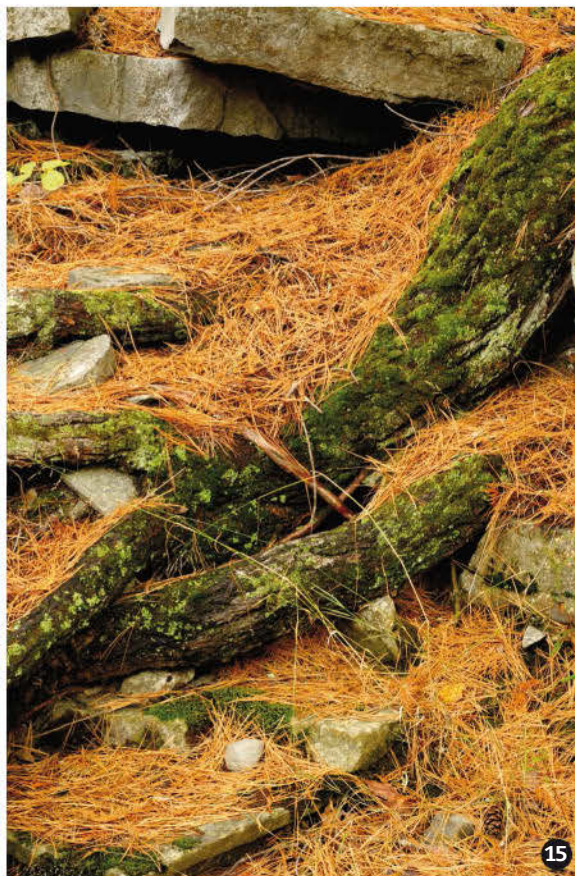
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With digital photography, it is easy to shoot waterfalls on a bright day, thanks to advances in filters like the Singh-Ray Vari-ND or a less expensive Neutral Density filter. Shooting from a tripod, you can dial up to eight stops of density with the Singh-Ray to allow the water to flow like salt on your images. On overcast days you can employ the slowing effects by lowering the ISO number or using a common polarizer to gain the same effect—in both cases by just combining a slow shutter speed and a smaller f/stop.

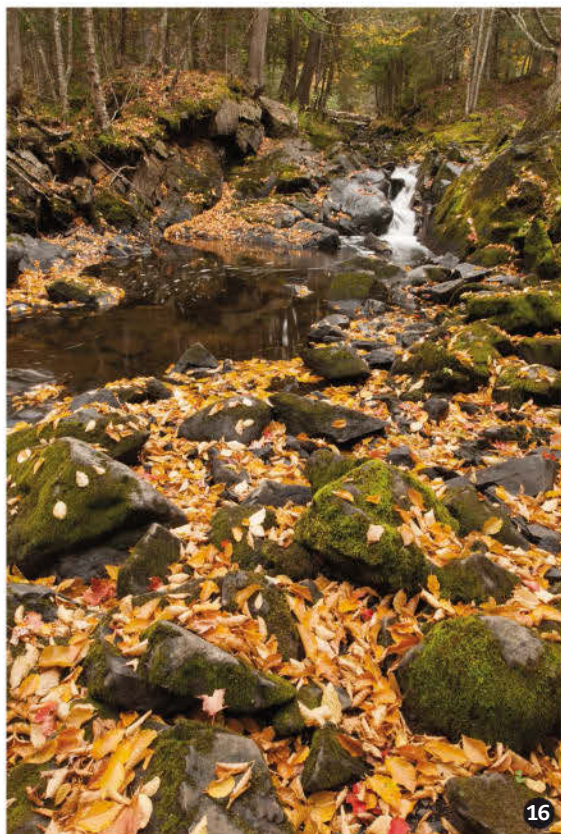
With today's cameras, metering difficult scenes is a thing of the past. Matrix metering is my method choice for 95 percent of my work, although if there is a critical element in the field of view, a flick of the switch to Spot or Center works perfectly. Always check your histogram for the perfect exposure making sure there is no clipping (especially on the red channel). This seems to be the hardest color to hold on some cameras, and with just a touch of over-exposure, it's hard to bring it all back into alignment for the details in the final printing.

Getting Artistic

Never be afraid of trying new things and one of my favorites is panoramic. While in Vermont, everything was perfect for a morning shoot of a famous farm in Woodstock. With this landscape lying in front of me, I took six photos in a horizontal format with about a 20 percent overlap. I processed them in Elements and the result was a photo that measured 9x66 inches long. If you have a Tilt-Shift lens, it's even easier for fall photography. Level the camera, take a photo to the full left of the shift, one in the middle, and one to the far right of the lens movement. Put them together in Photoshop and you'll get an easy panoramic. You



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can also try infrared—simply accomplished by the use of a R72 filter. Keep in mind that to take infrared photos you'll need a tripod since some exposures can run minutes long.

With all that color out there (even on a windy day with long exposures) the movement of brightly colored trees and bushes against a blue sky is stunning. Don't forget to look down as you walk and move slowly with your camera. There is plenty to see and I call that the "ground story"—water droplets on fallen leaves, lichen holding on to rocks and pine needles nestled around the trees.

Look around old stonewalls, as poison ivy can be brilliant this time of year but keep your distance! Stacking a color-enhancing filter with a polarizer can give some awesome effects, as would be the use of Gold-Blue filter but watch for corner vignetting (especially with wider, than wide-angle lenses).

Consider a photo workshop (or a tour) outside of

your usual working locations. As a working pro, I use the knowledge and expertise of other pros in distant locations. They know where the animals are, the best time for near peak color—in short, these pros can save you time, money and effort with the sum of this total meaning more time behind the camera and not the steering wheel. ■

STAN TRZONIEC HAS WRITTEN OVER 2800 MAGAZINE ARTICLES, HAS 850 MAGAZINE COVERS AND IS WORKING ON HIS EIGHTH BOOK. HIS SPECIALTIES INCLUDE FALL PHOTOGRAPHY, AMERICAN RAILROADS, BIRDING AND THE OUTDOORS. HIS BOOK "AUTUMN IN THE COUNTRY" IS IN THE REVISION STAGE AND "DIGITAL OUTDOOR PHOTOGRAPHY" IS UPDATED. ALL ARE AVAILABLE FROM WWW.OUTDOORPHOTOGRAPHICS.COM.



STAN'S GEAR BAG FOR FALL PHOTOGRAPHY

- ☐ Nikon D3s or D3x and a Kirk "L" bracket
- ☐ Nikon 24-70mm AFS- G f/2.8 lens
- ☐ Nikon 70-200mm AFS-G VR II f/2.8 lens
- ☐ Nikon 105mm f/2.8 macro or Canon 77mm 500D close-up lens
- ☐ Neck strap
- ☐ Cable release
- ☐ Extra EN-EL4a battery
- ☐ 10 Lexar 4GB CF cards (minimum)
- ☐ UR-1 step-up filter ring for 105mm lens (for 77mm filters)
- ☐ 77mm Polarizer
- ☐ 77mm Singh-Ray Vari-ND filter
- ☐ Right angle finder
- ☐ Tamrac Expedition 9 Backpack
- ☐ Gitzo tripod with Acratech GP ball head
- ☐ Notebook

[13] Around New England, cemeteries are a great place to view the fall color. Within this environment, the trees are left to grow over the years leading to some very full trees. Combining the dark trunks with the lighter leaves can lead to some interesting compositions.

[14] Look for different angles to document the fall. Moving up to higher ground, all that pops out of the color is this typical New England steeple. Perfect!

[15] If you want to back up a little on the ground story, some logs, sticks and pine needles make for an interesting photo. An overcast day is perfect for this, and with the camera set on "cloudy" the contrast has a natural boost to it.

[16] I love to use my perspective control lenses (Nikon PC, Canon, TS) on landscapes and here with such a range of distance between the foreground and background a small tip of the lens help to put all in sharp focus. A slow shutter speed helped to show the flowing of the water.

[17] Out in Colorado in time for the aspens going to full color, in some places leaves are starting to fall. Combine the bright yellow with an evergreen, a drop of water or two and you have a pleasing composition.

[18] My wife and I took a time out and ran off to Vermont for a few days. Unknown to us when we ask the hotel manager about a place to walk did we end up in a beautiful setting like this. Enlarged to 20x30 inches it occupies a prominent place in our house. Brings back memories for sure!





WHICH HDR SOFTWARE IS RIGHT FOR YOU?

We test and review three top HDR plug-ins

Text and photos by
JACK NEUBART

HDR (High Dynamic Range) imaging attempts to digitally reproduce a high contrast scene as it appeared to your eye when you took the picture. The process draws from (and blends) bracketed exposures into a final image with a more complete tonal range.

The HDR process is not complete in and of itself. Tone mapping is a key component, addressing the tonal range limitations of our display and output devices, letting us see the image we first envisioned.

While other options avail themselves, many of us opt for special HDR software to achieve these goals. We'll be working with Adobe Lightroom 5 plug-ins. Why plug-ins as opposed to standalone versions? First, they're not all available as standalone software. Second, it's convenient. We export the files out of and import them back into Lightroom for some added polish—all seamlessly, for a smooth workflow.

While I started with about twice as many applications, I narrowed the field down to three. The plug-ins I worked with are HDR Efex Pro 2, HDR Expose 3, and Photomatix Pro 5. As you read further, it should become apparent that this is not a detailed review of any one product. Instead, we're providing an overview of the HDR process vis-à-vis their use in Lightroom, while offering capsule comments on each plug-in.

The HDR Process

Each HDR plug-in uses its own





“Each HDR plug-in uses its own methodology and settings.”

methodology and settings. Each begins by synthesizing an HDR image with minimal input from you, but puts considerable control in your hands in the tone-mapping process that follows.

Normally we strive for more natural-looking results. That doesn't mean we can't emphasize bolder colors or more sedate tones if that helps us make a visual statement about the scene. Sometimes

we distort (or exaggerate) the tonal relationships, emphasizing the foreground by making it unnaturally or unexpectedly bright. We may even go to the extent of imbuing the image with an almost otherworldly texture, resulting in what we might call a “grunge” look.

The built-in presets are a good starting point. I find that they're rarely the final answer and I normally fine-tune

them for each HDR image. I then generate my own custom presets from these adjusted settings for later use, further refining them as needed.

HDR Software Tested

Each HDR application was tested as a Lightroom 5 plug-in on an iMac running OS X Mavericks. All of the tested plug-ins processed the same sets of exposures. For variety, we chose a different set of images for each plug-in (reflecting superior performance with that set of images). Some finishing touches were added in Lightroom, with Photoshop doing the cleanup. Note that the component images shown are unprocessed. (Downloadable free trial versions of the plug-ins are available.)

HDR EFEX PRO 2

The HDR process is fairly involved without being baffling, with this plug-in effectively aligning handheld images and dealing with ghosting, with the option of manual chromatic aberration correction. Some very fetching creative presets are included, but you can always add your own, or import them. This plug-in benefits from the use of Control Points to target the areas that need further attention. HDR Efex Pro 2 is fun to use and is capable of delivering some startling results. More info is available at www.google.com/nikcollection and be sure to check out the video tutorials.

Using HDR Efex Pro 2, I wanted to capture the subtle colors of sunset reflected in the



base of the sculpture (located in Arlington Heights, Illinois). HDR Efex Pro 2 not only let me do that, but it added a vital ingredient. I began by bracketing the exposures around $f/4$, with the camera on a tripod, ranging from -4 to +4 EV, in full steps, selecting five exposures in the end. When tone mapping, I selected a preset, then fine-tuned it and created a custom preset from that but I wasn't done. I used the Control Points in the plug-in to lighten the maiden standing atop the base and dramatically increase the presence of the sky, giving the shot a more dynamic feel. The finishing touches were added in Lightroom [1], [2], [3], [4], [5], [6].

HDR EXPOSE 3

This application produced the most realistic tonal range and, thanks to the eyedropper WB tool, exceptionally good

CONTINUED ON PAGE 24



THE HDR TIP JAR

1 When shooting for HDR, bracket your exposures at a given ISO (normally around a specific f-stop), while varying the shutter speed (preferably using auto-bracketing for speed and efficiency). The bracketed series usually involves three exposures (metered, +2, -2 EV or metered, +3, -3 EV), but there may be more. The key is to shoot and select the exposures that capture the needed highlight detail (underexposed frames) and shadow detail (overexposed frames), along with the metered exposure. On occasion, I've bracketed to +/- 4 EV, in 1-step increments, for a total of nine frames.

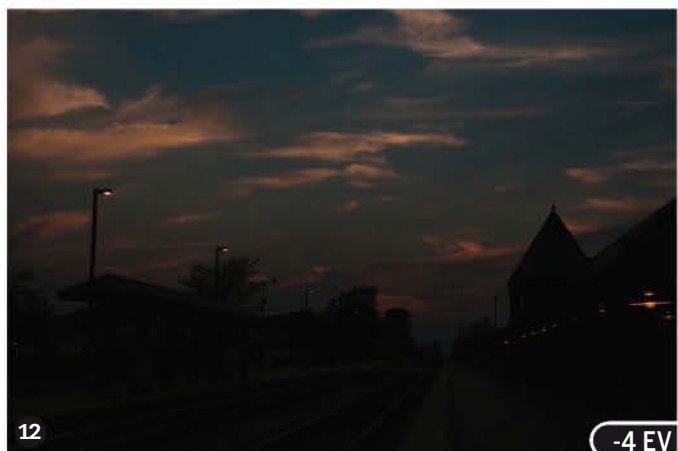
2 Where movement (camera or subject) is involved, it may be prudent to limit the number of exposures comprising the HDR to no more than three, to avoid alignment issues (resulting from handheld shooting) and ghosting (due to camera or subject movement).

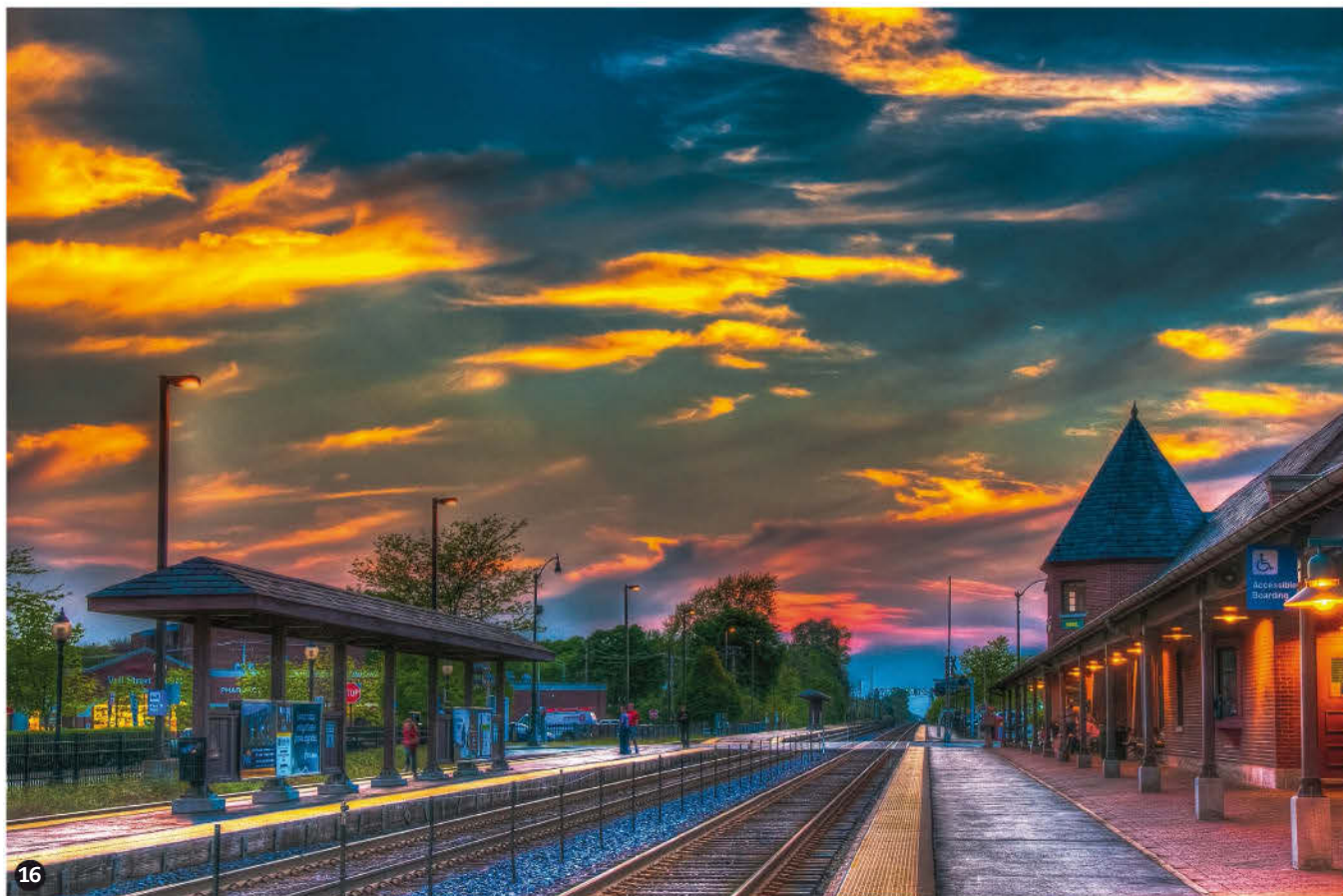
3 With the possible exception of correcting WB for serious color shifts (where converted files are involved), start with unprocessed camera Raw or 16-bit TIFF files when preparing images for HDR in Lightroom (unless the software directs you to do otherwise). While it's possible to produce an HDR from JPEGs, the resultant image won't have the same depth or richness.

4 Keep an eye on the histogram when tone mapping. In a perfect world, the head and tail of the histogram should barely touch (or just come short of) the frame sides. In reality, a little clipping at either end is okay and adds depth to a scene. This is manifested in the histogram as extending slightly beyond the edge of the frame on either side.

5 Scrutinize the image at 100 percent and watch for artifacts that might creep into your HDR. These include ghosting (overlapping elements or trace outlines resulting from subject or camera movement), color fringing, halos (an unusually and unexpected lighter tone surrounding the dark tones), and digital noise (especially color noise).

6 For best results, use a sturdy tripod.





CONTINUED FROM PAGE 22

color, with unfailing alignment and good ghost removal. The interface is not very user friendly, lacking wizards (pop-up instructions) to clear up the confusing settings, and the presets are largely unimaginative. Despite my grumbling, HDR Expose 3 is very reliable and faithfully recaptures the scene while adding depth to the image. More info is available at www.unifiedcolor.com.

I used HDR Expose 3 for this series. It involved subject movement and I also panned with the camera as the deer was crossing the road—with the auto-bracketing engaged. HDR Expose 3 didn't flinch, doing a nice job automatically controlling the ghosting. The plug-in brought out the depth of the tracks in the snow better than the other plug-ins together and delivered better color, thanks to the eyedropper WB tool. After exporting to Lightroom, I added my usual finishing touches. (The bracketed series is shown with the original color balance.) Nikon D600, Tamron 24-70mm at 70mm, ISO 1600, f/2.8, shutter speeds: metered at 1/250, -2 EV at 1/1000, +2 EV at 1/60 sec [7], [8], [9], [10].

PHOTOMATIX PRO 5

Whether you're into fanciful effects (or seek to recapture the fidelity of the

scene) this is my top pick, after testing it with numerous sets of images. The wide range of built-in presets and wizards go a long way toward making this plug-in user-friendly. The range of settings is about as complete as you'd need, and the results are normally clean, with very

“Working with these HDR plug-ins has been an eye-opener, especially once I got past the learning curve.”

competent automatic de-ghosting and alignment. Photomatix Pro 5 is fairly straightforward and can produce some very lively results. More info is available at www.hdrsoft.com.

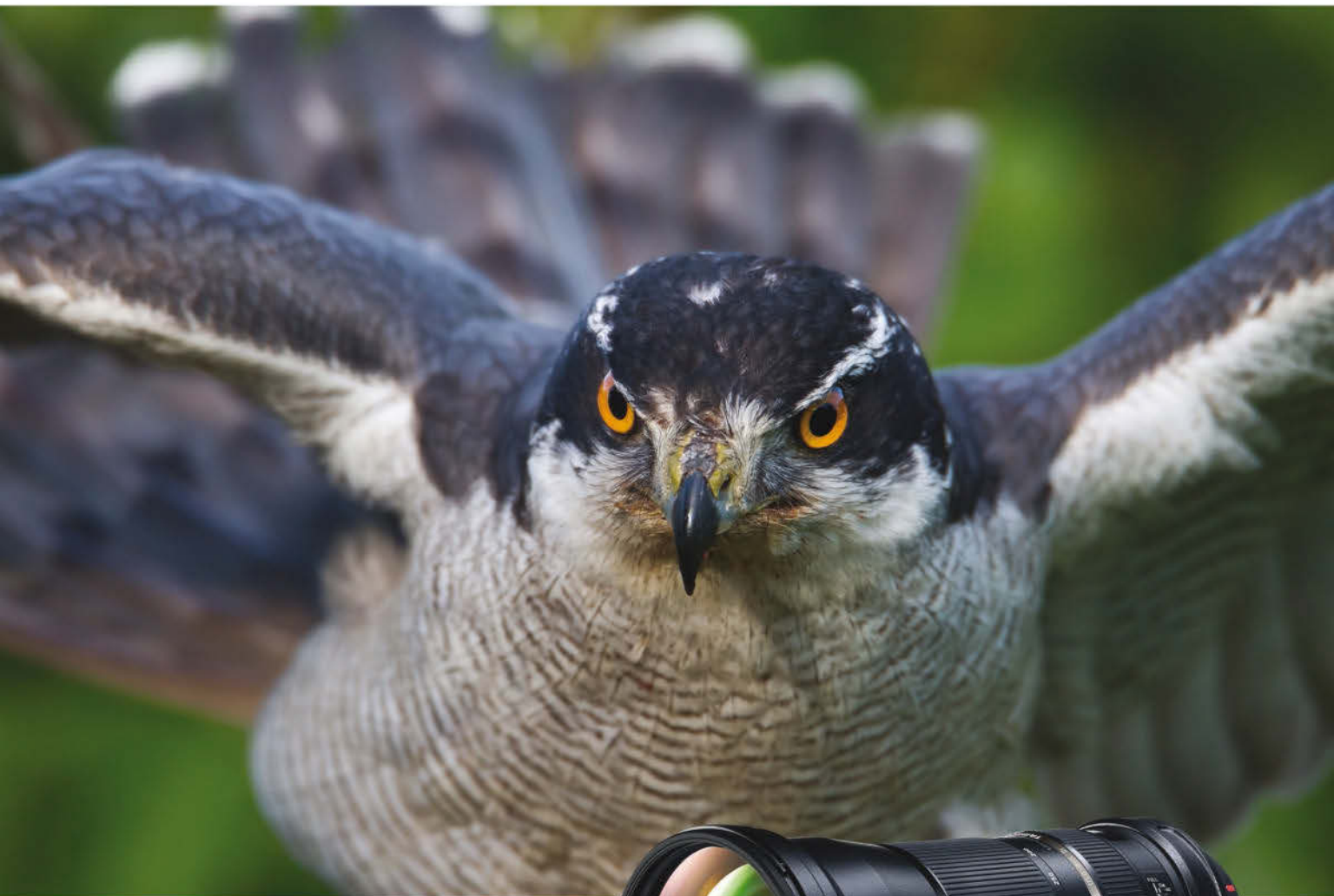
Photomatix Pro 5 offers numerous presets to get you started. For this shot, I set up my Nikon D300 on a tripod, bracketing the exposures in 1 EV increments surrounding the metered exposure, at f/11, from -4 to +4 EV, to capture the subtle nuances of the sunset. Out of nine exposures, I chose five for this HDR. After exporting the files to Lightroom, I added my own presets for the finishing touches to give the shot more drama and

color [11], [12], [13], [14], [15], [16].

Working with these HDR plug-ins has been an eye-opener, especially once I got past the learning curve. HDR Efex Pro 2, HDR Expose 3, and Photomatix Pro 5 each offers distinct benefits, while not without one or more foibles. With

any of these, an HDR image may magically happen with the least amount of effort—just choose a preset. More often than not, and certainly initially, it takes a little more work to achieve the results we seek. But it's all well worth the effort in the end, when we recapture the image we saw at the moment of exposure. ■

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Focal length: 600mm Exposure: F/7.1 1/640 sec ISO800 © Hiroto Fukuda



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GETTING THE RIGHT LIGHT FOR OUTDOOR SHOOTS

How simple changes in light modifiers impact the look of the shot

Text and photos by JAMES PATRICK



Working in outdoor environments can yield some unique challenges when trying to create—as well as modify—beautiful light for our subjects.

This is especially true here in Arizona where cloudless skies can provide very harsh light to work with in a desert setting. However, we are afforded the opportunity to use this light to our advantage through various techniques.

We arrived at the location about two hours before sunset. Although not specifically the golden hour—the sun was still in a much lower position on the horizon, which helped soften the light we had to work with as well as giving us some warmer, golden tones. This time frame is significantly easier to work in than trying to overpower the sun at



high noon. Not to mention that it was still in the low 100s when we arrived on location.

For our first shot, we used all natural light placing the sun behind our subject's shoulder as if it were a hair light [1]. We exposed for the subject's face, which allowed the background to blow out a bit. For this shot I was at $f/6.3$ and a shutter speed of $1/125$. By angling the camera, we were able to get some flare from the sun into the lens to add to the effect of the image.

Then we added in a 45-inch golf reflector that was being held by my assistant just to the right of the camera [2]. We were still using the sun as a hair light but with the reflector filling in our subject's face, I was able to stop down a bit to $f/7.1$ and expose just a little more of the background. The gold material on the reflector added more color to the subject when compared to the shot with all natural light.

Our next step was to set the reflector aside and use a beauty dish [3]. For this set-up we used an Einstein E640 strobe (www.paulcbuff.com) with a white beauty dish and a diffusion sock attached. We placed this to the left of the camera for the next shot. I chose the beauty dish for a few reasons—it delivers a nice specular light, which is flattering on most subjects and it pops out enough light to overpower the sun in many cases. The diffusion sock did cut down on the power of the light a touch—but I was still able to stop down to $f/11$, which darkened the background a bit. The beauty dish allows for a nice falloff of light and casts a slight shadow below



the subject's jawline and we continued to keep the sun as our hair light.

To modify the light again I added a ring flash to my camera in addition to the beauty dish (that was still to the left) [4]. The addition of the ring flash acted as a fill, adding light to the shadows on the subjects face, neck and dress. This is a great addition if you want to reduce some of the dark areas on your subject. All our camera settings remained the same to make this image.

Going another step further I placed a Neutral Density filter on my lens to reduce the amount of light that was entering the camera [5]. I often like doing this as it gives an interesting vignette effect to the image as well as

allows me to stop down all the way to $f/2.8$ to blur out the background more. For this shot I still was using the beauty dish as well as the ring flash to light the subject while keeping the sun as the hair light.

For the final image we simply readjusted our position [6]. The sun was now positioned more to my right side as opposed to slightly flaring into the camera—as it was with the other images. The repositioning and reduction in flare allowed me the ability to make the background look even darker. Even with the new angle, the sun still lit the subject's left side to help separate her from the background.

For each of the six shots we achieved

a completely unique look and feel to the final image. The ability to experiment with different ways you want to modify your lights (or use light modifiers) with the existing ambient light can yield some truly beautiful results—even in the harshest of conditions. ■

JAMES PATRICK, ACS, ALB IS A COMMERCIAL AND EDITORIAL PHOTOGRAPHER BASED IN ARIZONA. HIS CLIENTS HAVE INCLUDED MAX SPORTS & FITNESS MAGAZINE, SCOTTSDALE HEALTH MAGAZINE, MUSCLE & FITNESS HERS MAGAZINE, TROON GOLF, FITNESS MAGAZINE (SOUTH AFRICA), MUSCLE MILK AND MORE. JAMES HAS ALSO WORKED AS A MARKETING PROFESSIONAL, WEBSITE STRATEGIST, JOURNALIST AND A PUBLIC SPEAKER COVERING A VARIETY OF TOPICS INCLUDING PHOTOGRAPHY, MARKETING AND BUSINESS DEVELOPMENT. HE IS A PAST RECIPIENT OF THE INSIDE TUCSON BUSINESS (AS AN UP & COMER OF THE YEAR) AWARD AND HAS RECEIVED SIX ADDY AWARDS FROM THE AMERICAN ADVERTISING FEDERATION



(TUCSON CHAPTER) FOR HIS WORK IN COLOR PHOTOGRAPHY. HIS WORK MAY BE SEEN AT WWW.JAMESPATRICK.COM AND HE IS THE HOST OF THE PODCAST THE PRO EXPOSURE AVAILABLE AT THEPROEXPOSURE.COM.



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A NEW DAY IS DAWNING

Using Lightroom & Nik Viveza 2 software to transform a scene *Text and photos by JACK NEUBART*



I'm always giving my images a second (and a third) look to see how I could transform them from the mundane into something almost unimaginable—to breathe new life into them. When I looked at this particular image [1], I decided to play around to see where I could take it. Eventually it dawned on me (pun intended) that I had the makings of what was to become a work entitled, "A New Day Is Dawning."

The scene takes on an almost primeval appearance, and is now fully transformed. A new day really is dawning.

1 The Exposure Back Story

This is obviously a fall scene. A year ago, I was still shooting with my Nikon D600 with a Tamron 24-70mm f/2.8 VC lens attached, and employing auto-bracketing to produce three frames at different exposures (holding out the possibility of producing an HDR image from the series). But when I sat down to work on it, after just completing an article on HDR, I wanted to take it in a totally different direction.

So I decided to take a more conventional route—by starting in Adobe Lightroom and deciding where to go next later on. Shown here is the original series of exposures [2], [3], [4]. I bracketed at +/- 2 EV increments (ISO 800, f/5.6). The choice really came down to the metered exposure with well-exposed foreground vegetation or the underexposed foreground and well-exposed sky. I opted for the exposure that favored the sky, since it's much harder to bring back washed-out highlights.

2 Processing In Lightroom

I began with the basic steps, adding presence (clarity/saturation/vibrance), sharpening, tone and lens corrections. Then I went into the HSL settings—saturating red and orange to the max—while also increasing the saturation in the sky (aqua and blue to varying degrees, without overdoing it). I left the other colors alone, except for giving yellow a slight boost. I further toned down the luminance settings for aqua (to a small degree) while decreasing blue (to an even greater degree). That was followed by cropping out a bit of the foreground, to get rid of that green grass and the hint of road gravel in the bottom-right



corner. Admittedly, the picture still lacked dramatic impact at this point [5].

3 Processing In Nik Viveza 2

Viveza 2 is a plug-in that is bundled with the Google Nik Collection (\$149,



www.google.com/nikcollection). Nik software features Control Points, which target and adjust a specific color (or tone) while encompassing and affecting areas with a similar color/tone. Another feature Nik is known for is its Structure

setting, which is similar to Clarity (adding local/detail contrast) but with a unique grittiness to it. I used the Control Points and Structure for the sky. That brought out the texture and form in the clouds, giving them some added depth. But after completing this task, I'd decided to take it a step further and modify those same Control Points to manipulate the color palette in the sky. But there was something still not quite right about the picture [6].

4 Back In Lightroom

My friends commented that the blue should be deeper and the sky needed more contrast. Heeding that sage advice, I grabbed a scalpel (really just my mouse)—like Dr. Frankenstein attempting to bring life back into a fading dream—and imported the file back into Lightroom. Next I used a graduated filter, extending it from the top of the frame almost down to the very bottom. I set the filter to tone down the sky and add contrast to the scene [7]. (By the way, you may note that the foreground vegetation seems a bit noisy, but I like the gritty texture that it lends to the image—almost painterly. That said, some noise removal was applied in Lightroom.)

5 Final Touches

At this point there was still something amiss with the image. Oh, yes, I forgot about the blue in the sky. When you need to go in and touch-up selected areas with tighter control than a graduated filter would allow—without resorting to a plug-in—the best Lightroom tool for the job is the Adjustment brush [8]. So I used it to tone down parts of the sky. Even before that, I increased the clarity overall (for some added depth), and cropped a little off the top (I didn't care for that odd-looking glowing cloud up there and I wanted a greater emphasis on the foreground). The area in red indicates where I painted with the Adjustment brush (the spot where it was initially applied is indicated by that target-like dot near the upper right edge of frame, with the settings shown on the right side). ■

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WHY YOU SHOULD SHOOT IN RAW

Getting the most out of your digital negative

Text and photos by CHUCK GLOMAN

[1] This image is too dark. The dancers need separation from the background. There is no detail in their faces and you would never look at this image as being acceptable.

[2] The improved image. The background is not as intense and you can distinguish the dancer's faces.

[3] An image of Paige that is dull and doesn't add anything to her vibrant personality.

[4] A much better likeness of Paige. No major adjustments were made, just slight tweaking to improve it.

The art of photography has been around since the 1800s. The film negative was loaded into the camera, exposed to light (through the lens), processed and then printed as a positive image on paper. The only deviation from this was slide film which, when processed, resulted in a positive rather than a negative image.

There was one large drawback to using this "reversal" process over the "negative" process: the slide image didn't have the range or latitude between the darkest blacks and the brightest whites. Once you exposed the image, that was it, no changes could be made.

The processed negative held all of the vital information. Once positive prints were made, the dark areas could be brightened and overexposed areas could be darkened to a point. The final image could only be improved upon if the photographer used a negative. If you overexposed (or underexposed) slide film, there wasn't anything you could do except live with the result or reshoot the image.

In the digital realm, shooting in Raw is very much like shooting with negative film. In fact, Raw is often called the "digital negative" because your images may be easily changed, adjusted or improved upon.

Having been shooting digitally since the early days, I had never shot in Raw until the last several years because I didn't believe it was worth the extra aggravation. Instead, I would set my camera to shoot in large JPEG format. Now that I have been enlightened, I always shoot in Raw because of the control over the image.

It would take much more space to describe everything Raw image files contain, but I will condense it into how shooting in Raw can improve your final result.

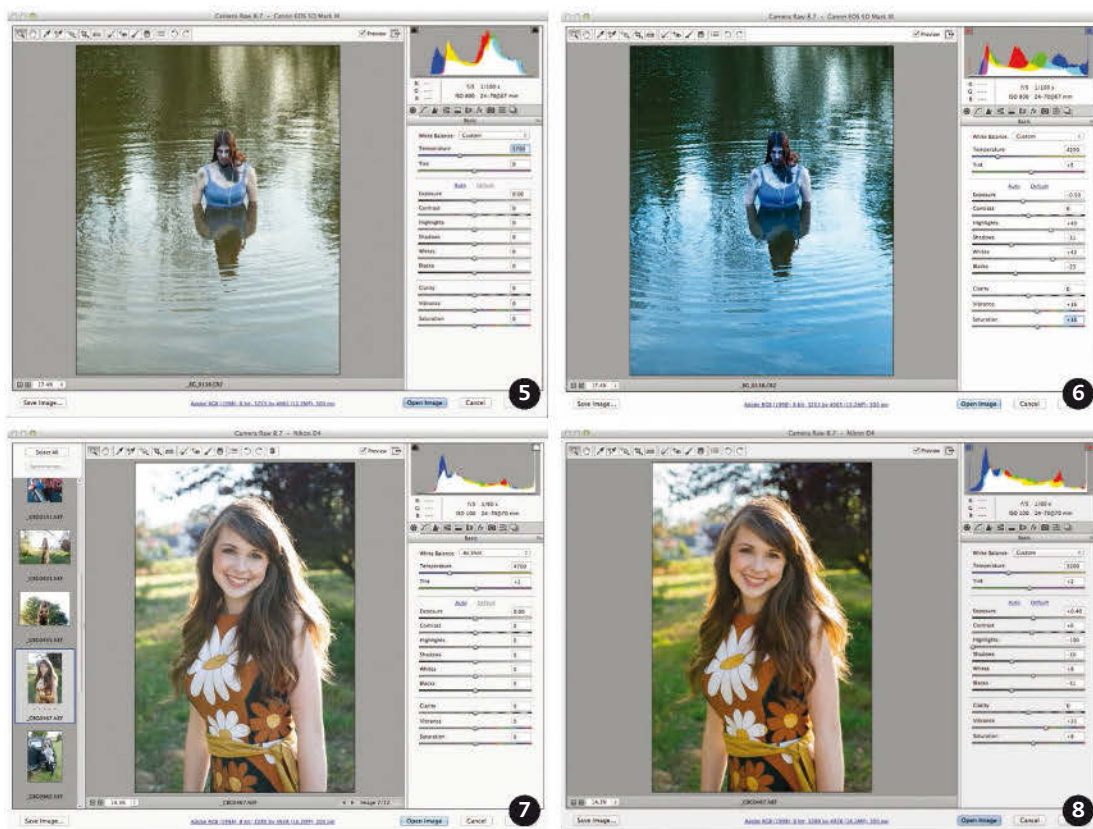
A Little History

A Raw file is an uncompressed image from your camera's sensor. The file contains all of the color level, balance and exposure information and the information must be decoded (or uncompressed) in order to view or print the image.

When setting up your camera you have two options: shooting in Raw only or Raw and JPEG. My Canon EOS 5D Mark III offers three sizes of Raw: Raw 22MB (5760x3840), MRaw 10 MB (3960x2640) and SRaw 5.5 MB (2880x1920). Obviously, the larger the Raw file the more information contained within it and a greater footprint that will allow for fewer images on your memory card.

I am not a big fan in shooting only in Raw because the images are slower to load and (although they





[5] This horror image is rather mild, but is exactly as we shot it. If used as a publicity still, it must better match the final product.

[6] With major adjustments in color temperature and hue, we have a scarier image. We could have gone much further and made her skin tone bluer, but the film script explains that her transformation is gradual.

[7] Ally's hair is overexposed where the sun is hitting it and the sky is white—also from overexposure. If I exposed for the sky, Ally would be too dark. All this can be corrected with Highlights.

[8] In the corrected image, Ally now has a gentle highlight in her hair and the sky has some color to it. Both of these corrections were made with just one slider adjustment—Highlights.

may be viewed on the camera's LCD screen) they must be processed/decoded with editing software. The best of both worlds is to shoot in Raw and JPEG. My Canon camera offers different size Raw files as well as eight JPEG sizes. The JPEG is simply a fast way to view the file. If you have a larger card, you may choose larger JPEG files; this is a matter of preference.

Why should you shoot in Raw? The easy answer is total control of your images. When shooting, we may not have selected the correct F-stop, shutter speed or color temperature. Or the subject is too back (or front) lit and the exposure must compensate for that. If your image isn't exactly the way you desire. Shooting in Raw will allow you to improve on it and make any necessary changes in post. You might say, "I can do the same thing when I shoot in JPEG." That statement is also true, but there are a few drawbacks.

When I shoot exclusively in JPEG, I select the largest file size so it contains the most information. Using Photoshop, I could change all of my visual parameters—to a point. I could make minor corrections in color temperature, saturation, hue and exposure. With JPEG files, all of the information from the sensor is there but heavily compressed. A JPEG is gamma compressed to eight bits (or about 256 shades) of color. Every time you open a JPEG, make any adjustments and save it—it further compresses the file. After a few open, change/save cycles the image may not look the same because of so many compressions—much like making a copy of a copy in VHS.

Canon names its Raw files as CR2 and Nikon NEF, so you can recognize them immediately. The Raw file has 12-14 bits of intensity information per channel or between 4096 to 16384 shades of color—

considerably more than JPEG.

When shooting an event, I may have over 100 images (in Raw and JPEG). I open Photoshop, load all of the JPEG images from my memory card, select the ones I like (record the file number) and save the Raw images to my hard drive. I process each Raw image and save them as a corrected JPEG file (with the appropriate name) and send it via the Internet, or print it. I still save the master Raw file so I can go back and make further corrections and save different JPEG versions (naming them differently from the first file). This naming process is critical because you may have many different JPEG versions from the same Raw file. Devise a system that works for you to avoid confusion. This process takes up a little more storage space, but you can delete the files that you will never use because of problems (blurry images, closed eyes, etc.).

Let's look at some examples of images that were "improved upon" by shooting in Raw. I will be using Photoshop CS6 as example software, but there are many other programs that work just as well.

In the first example—in order to capture the action—I shot this at a high shutter speed [1], [2]. When shooting it, I had some strikes against me:

An ISO of 2500, an extremely narrow depth-of-field (at f/2.2) and a fast shutter speed of 1/640 of a second and the dancers were positioned against a lit, deep blue background with very little illumination on their faces. Trying to correct this JPEG would have been time consuming—if even possible.

By opening the NEF file (Nikon D4) in Photoshop, I have slider adjustments in: Temperature, Tint, Exposure, Contrast, Highlights, Shadows, Whites, Blacks, Clarity, Vibrance and Saturation—all of them are under the "Basic" menu.

The first thing I would normally adjust is the

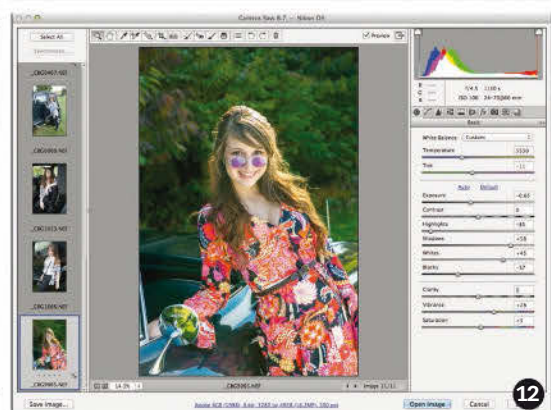
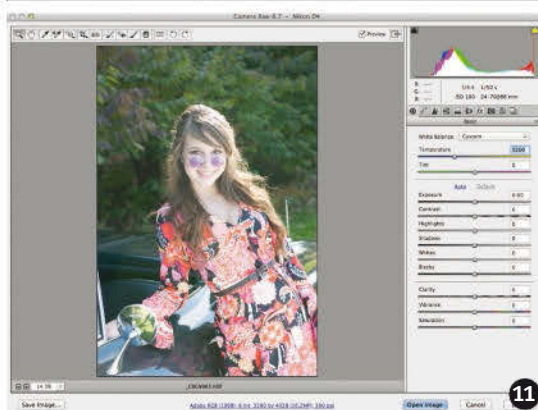
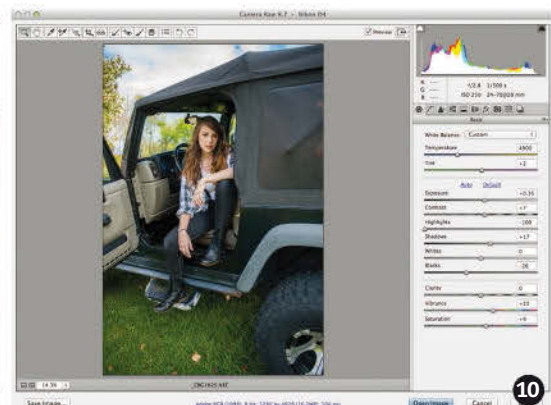
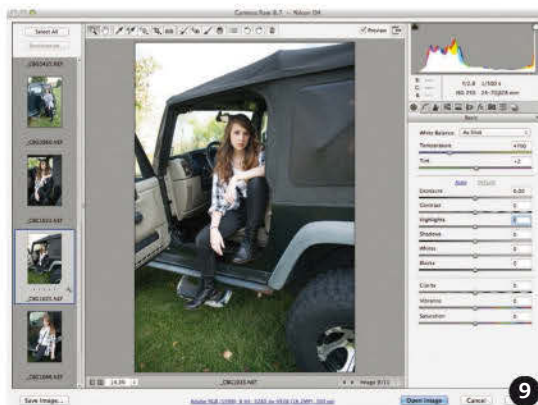


[9] Here I needed to expose for Ally in the Jeep because she was the focus of the image. In doing so, I lost all of the color and exposure in the sky and her dark slacks were blending into the vehicle's interior. Her arms are also overexposed in that her skin is far too white.

[10] The corrected image brings the color back into the sky, darkens her skin tone (to its natural state), and separates her from the interior.

[11] Here I should have stopped down the manual exposure before capturing the image. With the limited time I had with the vehicle and Ally, I knew I could fine-tune the image later.

[12] Keeping the same quality to the image, Ally's exposure is better allowing the colors in her dress to pop.



color temperature. The lighting is theatrical so I won't adjust this setting but because the image is dark, I will adjust the exposure slightly. According to the metadata, the image was exposed at f/2.2—too dark. I can't change the F-stop so I'll move the slider to the right until I get the desired effect—moving from zero (my camera exposure) to +90. If I wanted the image darker (or stopped down from f/2.2) I would move the slider to the left or type in a negative number. When raising (or lowering) the exposure, watch the Histogram to keep the whites from blowing out. I moved the Contrast slider from zero to -18, the Shadows were moved from -37 to +90—which added a little fill illumination. The Blacks were increased from -18 to +28, to lessen the intensity of the blue background I adjusted the Vibrance to -13.

Once the Basic adjustments have been made, you may go through the other menu options: Tone Curve, Detail, HSL/Greyscale, Split Toning, Lens Corrections, Effects, Camera Calibration, Presets and Snapshots.

With Paige's portrait, the initial CR2 file was bland [3], [4]. Once adjustments are made to the Color Temperature, Tint, Exposure, Highlights, Shadows, Whites, Blacks, Vibrance and Saturation, I had a better image. As you slide the exposure left or right, it changes the parameters of the Highlights, Blacks, Shadows and so on. Often you may make an adjustment in one area, adjust another, then return to the first adjustment and tweak it slightly. This process takes very little time and you'll soon establish a pattern.

I was doing some special effect work for my classes' short suspense film titled "Granted" and took a photo of this actress in a pond [5], [6]. Adjusting the Raw parameters, the corrected image looks much

scarier. I changed her skin tone to match exactly how the color-corrected image looks in the video. These global changes are only possible in post.

In this next example, the sky is blown out (with no color/detail) and Ally's hair is over exposed [7], [8]. It looked fine when I shot it, but I knew I would have final approval with Raw in post. One of my favorite features with Raw is the Highlight control. I moved the slider to -100, getting rid of the highlights in her hair and the sky. Her hair now has a mild highlight and the overcast sky is blue again with some detail. Without the Highlight feature, this image would not have been useable.

In order to properly expose Ally in the Jeep, I had to open the iris and let the sky behind her over-expose [9], [10]. If I were shooting just with JPEG, there would be little hope for the sky. Working with the Highlights slider, I was able to bring the blue back and clean up the rest of the image to make it more presentable.

As Ally (backlit by the sun) leans against this vintage 1966 Corvette Stingray, some Raw adjustment was necessary with the overexposed image [11], [12].

I find that anytime I want a backlit subject (and I want their hair to glow) I need to make major adjustments in Highlights. This is not something I can control too much on location without adding another scrim to soften the sunlight. That requires more time at the location and more attention to detail. I am not saying that shooting Raw should be a crutch, knowing this ahead of time is making me a better photographer—I'm always learning. ■

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TIPS FOR PHOTOGRAPHING NEWBORNS & BABIES

How to capture those special moments of new arrivals

Text and photos by CHUCK GLOMAN

[1] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/4.0, shutter speed 1/80th, ISO 800, color temperature 5950°K. Brooks being the first one awake, liked our Adorama CoolVee 7 Florescent light. It is more advisable to raise the ISO and lower the light output on your set.

When a new addition to the family arrives, everyone grabs a camera (or a smart-phone) to preserve a fleeting image of the precious child. Newborns are one of the most challenging subjects to photograph because a baby is not accustomed to bright strobe lights, flashes or brilliant sunlight. I believe its best to capture

these images in a more favorable environment, where the newborn is comfortable.

From birth to a few months of age, a newborn will be of limited help when you are on a photographic assignment. Certain reflexes (like smiling) are mostly developed and the fantastic image of a baby smiling maybe no more than a reaction to gas. Obviously, these tiny miracles will let you know when they are happy, hungry, and/or wet. I joke with the parents that I am afraid to

touch the infant because of too many “soft spots” and being unfamiliar with their needs. One of the parents is always more that happy to help me in these situations by “posing” the infant with soothing objects.

My first exposure to seven-week-old twins Jaxson and Brooks was when they arrived in their tandem baby carriage in our university’s TV studio. In a new place, it took the twins a little while to become comfortable to their surroundings. The infants needed feeding and changing every few hours so I knew my window would be brief and I did not want to scar their memories with blinding lights or loud noises.

Preparation

Always let one of the parents handle, position, cuddle, pose, and wrangle your subject. Infants are used to comforting smells, familiar sounds and a routine (this photo shoot was not in their routine). Not yet able to crawl, walk (or drive) both of the twins were positioned in our prepared baby area.

This “baby area” might take a little explaining, as their safety and well-being





are the most important factors in the very limited time before they realized what I was actually doing. Not wanting to put them on the floor for obvious reasons, I decided to elevate them by draping a grey paper backdrop over a 30-inch high table creating a cyc. This surface would still be too hard so additional familiar blankets and towels were bunched together. The twins had used the blankets before and the sight and smells were not objectionable.

Arrange all of the lighting ahead of time because the newborn's mood could change rapidly. Never use strobes on newborns—they are too bright, loud and not something they should be exposed to this early.

I used a Lowel Prime LED Fresnel (daylight balanced) as a backlight because it gave off no heat and would separate the twins from their background (<http://lowel.tiffen.com>). The key light was an Adorama CoolVee 7 (www.adorama.com) that used seven fluorescent lamps enclosed in a fabric softbox with white diffusion to further soften the light. The number of lamps illuminated could be controlled and this daylight source was soft and gave off no heat. If placed closer to the subjects, selected lamps could be extinguished. A white piece of foam core was to the subject's immediate right as a bounce/fill source.

Getting Reactions

With both twins together in the baby area [1], Jaxson would not wake up and Brooks did not like having his picture taken after just waking up. It was decided by all that we center on Brooks first in a solo portrait.

Infants will focus on close objects and familiar sounds. As his mother went through her vocabulary of soothing sounds, we got him to look at the soft, florescent light on the left of the camera. Wanting the sparkle in his eyes from the CoolVee 7, Brooks had a soft, even illumination on his face with just the right amount of backlight from the LED on his blonde hair.

Its best to take as many Raw images as possible because even



[2] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/5.0, shutter speed 1/125th, ISO 800, color temperature 5750°K. Jaxson, dressed in his favorite team's hoodie, was more comfortable having his picture taken. Have the parents help you select an image which best captures their child's personality.

[3] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/4.5, shutter speed 1/60th, ISO 100, color temperature 4650°K. Aubrey, my youngest subject ever at 20-days, preferred being shot with her mother on the set. Natural daylight was the best choice of lighting.

[4] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/5.6, shutter speed 1/200th, ISO 500, color temperature 4500°K. The previous image showed contrasts, this image highlights similarities. All of the various saturation levels of pink make this a pleasing baby picture.

though infants have limited actions, they are still constantly moving. Placing Brooks on his back made him unhappy and stomach positioning was his preferred mode of posing. Propping him on his blanket, I hoped to have him resting on his hands. Without resorting to Photoshop, I believe I got a natural "prop up."

With Brooks resting in his carriage, Jaxson was awake and ready for his turn [2]. Leaning on his hands on top of his blue and green polka dot blan-





5

[5] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/13, shutter speed 1/200th, ISO 100, color temperature 6150°K. Henry, believing he was controlling the strobes, still had the comforting safety of his book. Wanting a deep depth-of-field, his entire body was in sharp focus.

[6] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/13, shutter speed 1/200th, ISO 100, color temperature 6150°K. With identical metadata from the previous image of Henry, food was introduced giving us his undivided attention.

ket, his personality was quite different from his brother's. Using the same lighting setup, Jaxson still had an LED backlight and the soft fill from the florescent light and bounce card.

TIP: Photo sessions with newborns should be brief.

Using Window Light

Aubrey, only 20-days old, was extremely camera shy and needed her mother close by [3]. The most important thing in her young life was her mother and her soft encouraging words, touch, and smell relaxed Aubrey.

Looking for more of a photographic contrast, her mother selected a pink outfit against a black piece of fabric. Rather than use any uncomfortable supplemental lighting, I chose window light. Her mother simply stood next to a window and let the soft filtered winter daylight stream through the window. A white piece of foam core placed on the opposite side of the window creating the needed fill illumination. Stark contrasts in colors (or brightness) made this image pop.

TIP: When photographing infants this young, soft indirect lighting is more comforting and easier on their young eyes.

Still using natural window-filtered daylight, we laid Aubrey on her pink blanket as her mother held her hand [4]. This time, a white piece of foam core placed directly in front of the camera bounced soft, ambient light onto her. You may notice the reflection of the window and foam core in her eyes. Aubrey's mother chose this shot as her favorite not because of the soft, natural lighting but rather the size comparison of her adult hands with her daughter's. This is a very soothing image (from a



6

color standpoint) because of the similarities in all of the pinks—a bright pink hat, a soft pink blanket, and pink trim on her sleeves.

Henry stepped up to the plate at the age of eight months [5]. His mobility, fascination with toys, and energy level were higher. It takes much longer for older babies to get used to new environments

because they seem to notice more, so a favorite toy should be included to capture their interest. Henry wanting to focus more on his book than me, was content to sit on the white paper backdrop flanked by strobes on his left and right.

Strobes are accepted by babies of this age more so than newborns. Henry enjoyed the first few times the strobes fired and it became a game of magic. Allowing him to think he was controlling the strobes helped him to adjust. His mother did a great job of teaching him to share his powers or I would not have had my turn when taking this photo.

The Photogenic Strobes (www.photogenic.com) where set to a height of four feet, eight feet away from Henry on his right and left. They were set to half power and pointed into the umbrellas to create soft illumination but still leave a sparkle in his blue eyes.

Keeping the same lighting set-up but facing him in the opposite direction induced more acceptance of me [6]. A change of tops, the addition of an orange ball in the background, and a child's favorite food (Cheerios) made him happier. Placing his mother slightly out of frame, I knew Henry would look wherever she was. If you want the child to look up, down, or straight ahead—simply place a parent exactly where you want them to look.

Wanting a slightly more “grown up” pose from Henry, his mother held him at his waist level [7]. These impromptu poses don't last long so I was thankful of the fast recycle time of the strobes.

Shooting At Eye Level

Alana, showed her maturity level at nine months [8]. Wanting a stronger backlight, I placed her where the



sunlight would filter through the window and our trusty foam core provided bounce illumination on her face. By having her mother stand at her full height, Alana looked up as I framed her while sitting at her level.

TIP: It makes much more sense shooting babies at their eye level rather than looking down on them.

Moving in for the medium close-up, I wanted a very shallow focus to blur the carpet's pattern with light streaks to offset her colorful dress [9]. Her face was in focus, but her left shoulder was quite soft. Extremely narrow depth-of-field allows you to selectively focus on what is important—the subject's face.

Hopefully, these few images and tips will increase your comfort level when working with newborns and infants. No other time in a person's life changes this quickly, needing documentation almost weekly.

Keeping the lighting soft and indirect, placing a parent where you want the baby to look, getting down to the infant's level for shooting, and giving them a safe, prepared environment will help make everyone happy with the finished results. Where else can you make strange sounds and talk baby talk legally? ■

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[7] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/13, shutter speed 1/200th, ISO 100, color temperature 6150°K. Henry hangs out with his mother with his cool, relaxed stance.

[8] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/3.5, shutter speed 1/60th, ISO 100, color temperature 4100°K. Shot at her eye level, a strong backlight and a slightly busier background pulls you in.

[9] Nikon D4, Nikkor 24-70mm f/2.8 lens, f/3.5, shutter speed 1/60th, ISO 100, color temperature 4100°K. Selective focus with just Alana's face and right shoulder in sharp clarity.





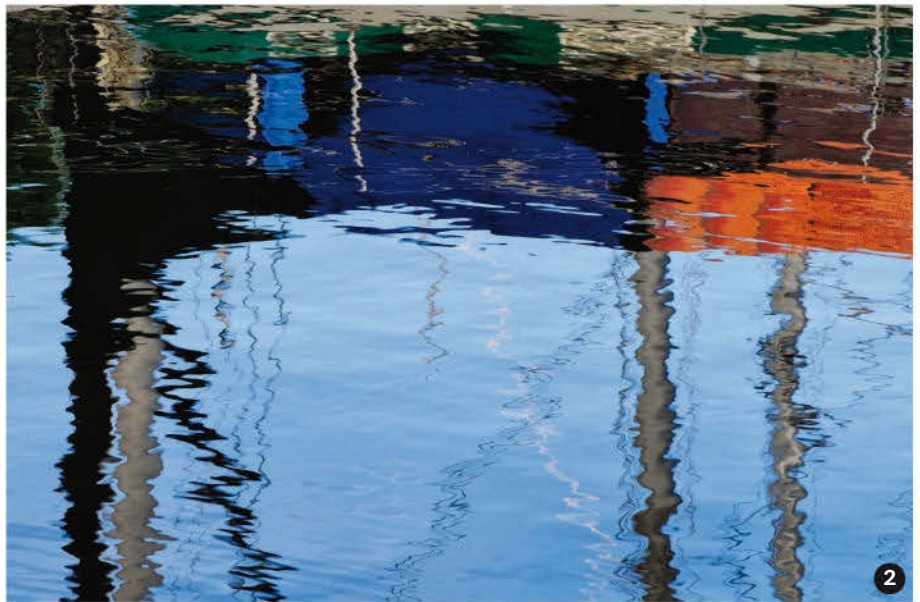
WHEN IN DOUBT, CROP IT OUT

How careful cropping can unleash an image's true potential

Text and photos by JEFF HOWE



[1] Mum. In order to simplify and highlight the primary subject (the bent petal), I cropped the blossom to emphasize and re-position the petal. The image was taken with a 105mm macro lens with the camera set up on a Manfrotto 055CXPro3 tripod (www.manfrotto.us) and an Acratech ballhead (www.acratech.net). The exposure was f/3 at 0.77 second and ISO 200.



[2] Reflections. Unable to eliminate several dock pilings and portions of a boat in camera, these distracting elements were cropped out. The image was taken with a 105mm macro lens with the camera set up on a Manfrotto 055CXPro3 tripod and an Acratech ballhead. The exposure was f/11 at 1/30 second and ISO 200.

One of the most exciting and demanding aspects of photography is capturing the overall scene (or subject) then redefining and extracting specific images from it. As a photographer, I'm trying to search out

and determine what visual cue in a scene speaks the loudest to me, in terms of overall impact, and then I zero in on it. This process will be different for most of us.

It's easy for our senses to go into overdrive when presented with an exciting subject. Once sensory overload has occurred, and without





much thought, we wildly start pressing the shutter button. Due to frustrating results early in my freelance career, I have learned to view my subject first from all perspectives, hoping to extract the most powerful image. I walk around the subject, lay or kneel on the ground or come back at a different time of day (or a different day based on the weather or the lighting conditions). Taking the time to explore your subject will aid in developing a better sense of what part of the scene speaks the loudest to you and ultimately will improve your photography.

I will (to the best of my ability and equipment) produce the most striking, powerful and dynamic image in camera. Sometimes no matter what arsenal of equipment you have, you may not be able to crop the subject exactly as you imagine it (or would like to) in camera. This is where cropping using image editing software comes to the rescue.

It amazes me how something as simple as cropping can make the difference between an average and a stunning image. And yet, it surprises me how often photographers don't perform additional cropping because they feel the image has to fit into a standard size. No matter how much post processing is conducted, if an image is cropped poorly, it may never exhibit its true potential. Because our options are infinite, this is the part in my workflow where I'll usually spend the most time. And there may be more than one image waiting to be extracted from the same

scene.

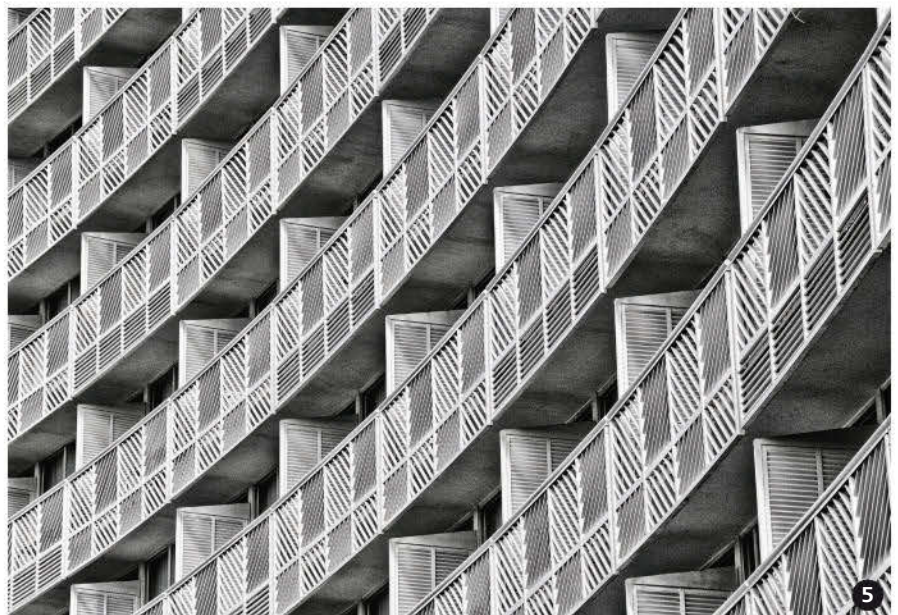
After a photo shoot, my workflow consists of downloading the images to my Photoshop Elements catalog where I review them, delete any that don't measure up, assign keywords and captions, and flag the images that I'm interested in processing. No matter what my vision might consist of (and before I make any adjustments or employ specialized filters, etc.) my first task is to crop it.

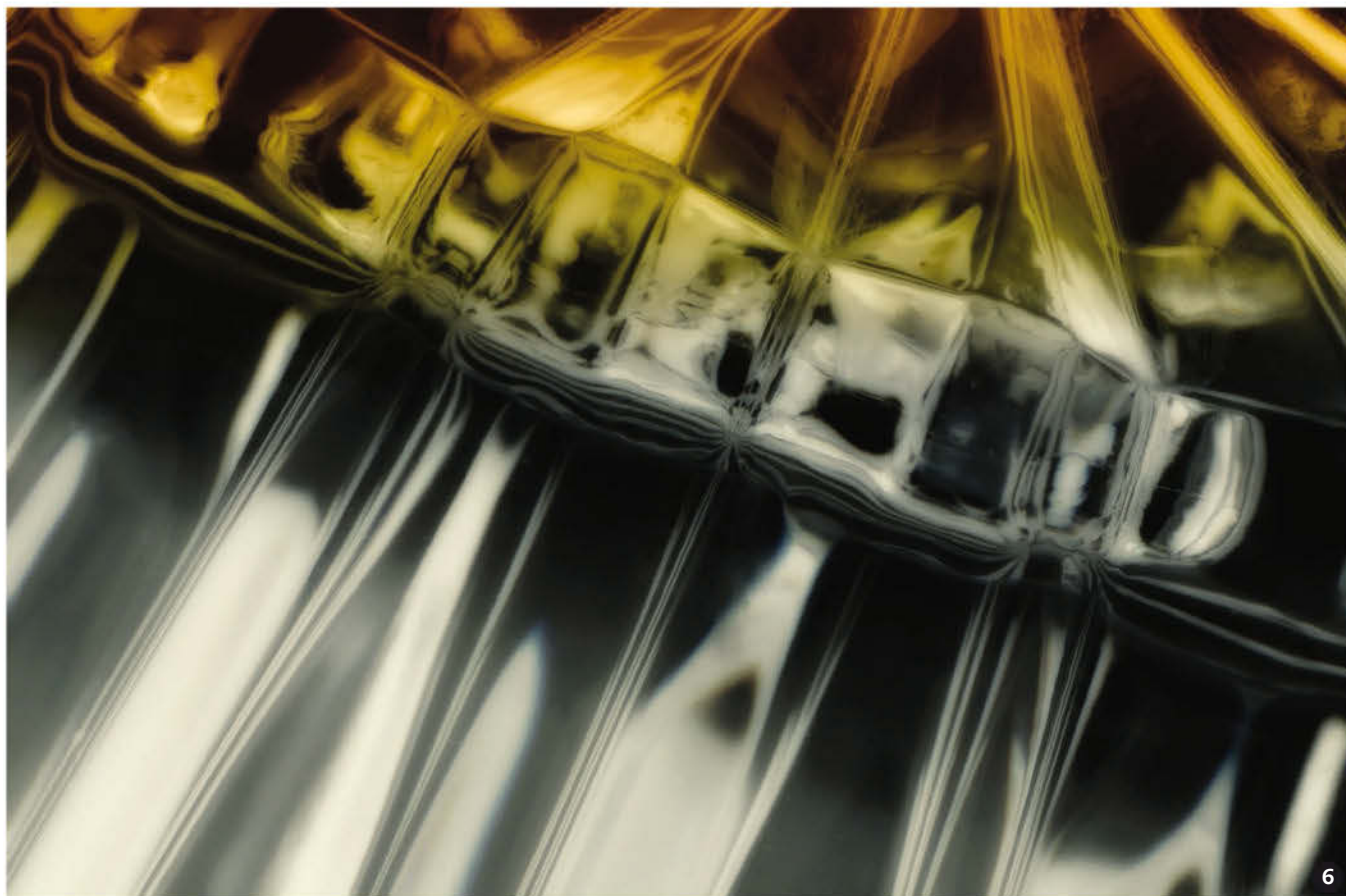
Although I always attempt to frame and compose the image in camera, we are restricted based on film and digital sensor size. Even

[3] Blue Blossoms. Although I created numerous images of a single blossom and surrounding green vegetation, I discovered that an image with two blossoms produced a more pleasing (and balanced) image. The image was taken with a 105mm macro lens with the camera set up on a Manfrotto 055CXP Pro3 tripod and an Acutech ballhead. The exposure was f/20 at 1/13 second and ISO 200.

[4] Abandoned Truck. Although the original image was of the entire rear windshield, I cropped the image to place the steering wheel in a more powerful and desirable position. The image was taken with a 12-24mm zoom lens with the camera set up on a Manfrotto 055CXP Pro3 tripod and Acutech ballhead. Exposure was f/9 at 1/60 second and ISO 200.

[5] Condominium Lanai. Although the image was originally shot in a vertical format, cropping to a horizontal format produced a much more pleasing image. The image was taken with an 18-200mm zoom lens with the camera handheld. The exposure was f/9 at 1/320 second and ISO 200.





6

the best in camera framed images can almost always use some tweaking in post processing. Cropping is a very simple undertaking in editing software, this is where I may spend the most time. My goal is to crop for maximum effect which may involve organizing the subject in a strong and meaningful context, to guide the viewer through the image, to intrigue the viewer, and/or to evoke an emotion. Before you experiment with any cropping options, always duplicate your image and keep the original in a secure location. The following guidelines may assist in maximizing your image's potential.

[1] Identify the subject. How can the image be simplified or what can be deleted (excess background) to bring the focus back to your subject?

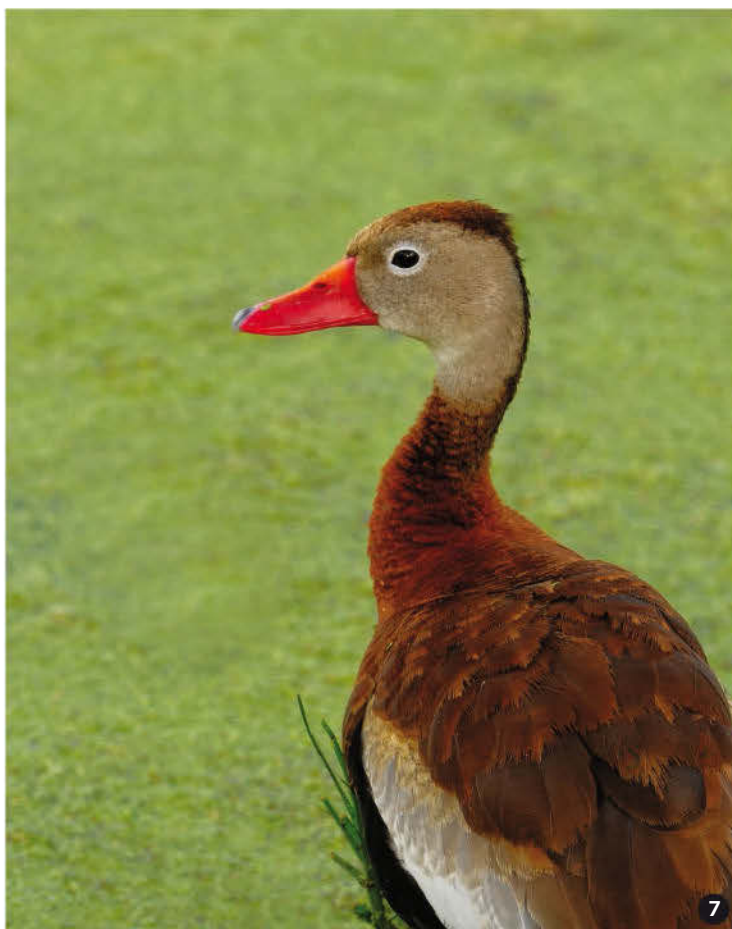
[2] Crop out all of the distracting objects. Although we have the option of digitally removing them through Cloning, unless the area containing the distracting items contributes to the image, remove it all together. This is where it helps to think like a painter. Given a blank canvas, would a painter have placed that item into the painting? As the old adage goes, when in doubt, leave it out.

[3] Crop to balance the image. For example, portraits benefit greatly using a balanced approach.

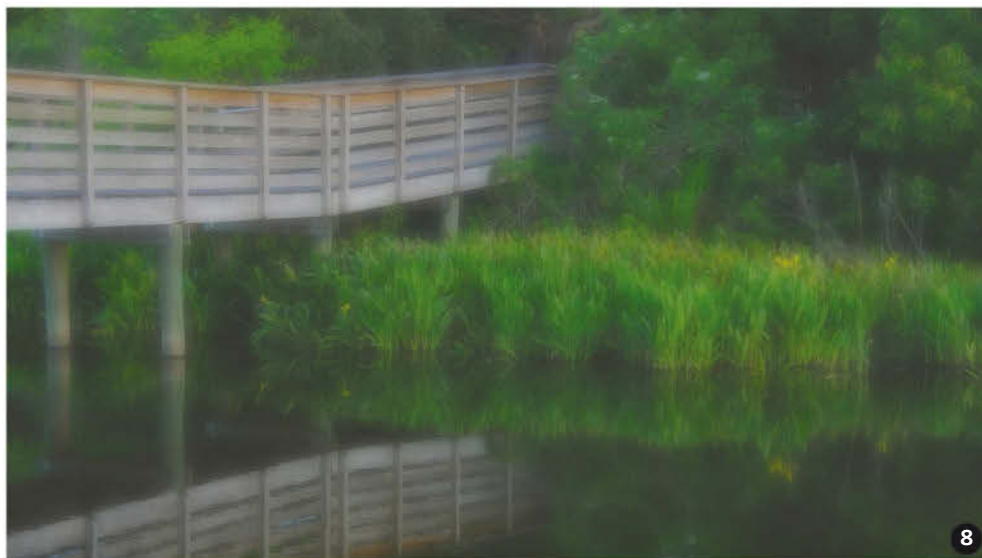
[4] Crop to reposition the subject. For example, a simple crop could place the subject in a more powerful or desirable position (the rule of thirds).

[5] Crop the image to change the format from vertical to horizontal (or vice versa). To eliminate this need, get in the habitat of shooting your subjects in both formats.

[6] With high resolution digital cameras, you have the option to crop very tight to create abstract images or



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one comprised of a significantly smaller portion of the original shot.

[7] How many images have you discarded because your subject is too close to the edge or is clipped on one side? Cropping the image even tighter may take the focus away from the clipped portion.

[8] Crop to direct the viewer's eye into (or within) the image. Use leading lines to guide the viewer into and through the composition. How can you crop your image to create depth? Maybe the resulting composition asks a question. Does it intrigue the viewer?

[9] Leave plenty of space in front of a moving subject or if the subject evokes motion.

Cropping could make printing difficult if your lab only prints standard shapes and sizes.

That said, it may be time to seek out a different lab. Why would you want to create and exhibit a standard size print that would undermine your work as a photographer?

One option (if printing standard sizes) is to purchase a custom cut mat that takes into account the desired crop. Your cropping options are unlimited.

Take your time and explore the many cropping options before settling on one. You might discover that you can create more than one equally powerful image solely based on cropping. ■



ALL OF THE IMAGES WERE TAKEN WITH A NIKON D300.

[6] Glass Vase. Based on the location of the glass vase, I was unable to zoom in on just the reflective portion that was of interest to me. Based on my 12MB camera (and digital cropping) I was able to create the image that I envisioned. The image was taken with a 105mm macro lens with the camera set up on a Manfrotto 055CXPro3 tripod and an Acratch ballhead. The exposure was f/40 at 1/3 second and ISO 200.

[7] Black-Bellied Whistling Duck. In the original image, the duck's hind end was touching the bottom right hand corner. By deliberately cropping the duck, I was able to produce an acceptable image and positioned the duck's eye according to the rule of thirds. The image was taken with a 70-200mm macro lens with the camera set up on a Manfrotto 055CXPro3 tripod and an Acratch ballhead. The exposure was f/5 at 1/200 second and ISO 200.

[8] Boardwalk. While hanging over the side of the boardwalk, I wasn't able to crop the image in camera with the leading lines I was hoping for. Cropping made this an easy fix. The image was taken with an 18-200mm zoom lens with the camera handheld. The exposure was f/4.5 at 1/160 second and ISO 200.

[9] Young Lady. The image was taken with a 70-200mm zoom lens with the camera braced on my knee. The exposure was f/7.1 at 1/160 second and ISO 1600.



9



BRING IN THE BIRDS

How to create incredible composite images while blending in elements of nature

Text and photos by JACK NEUBART



I managed to achieve my goal in a few short hours using Photoshop. I then decided to add a more colorful twist and it took considerably longer to get the nuances just right.

For this project I used Adobe Lightroom 5 (initially for Raw conversion), Adobe Photoshop CS6 (primarily to create the composite, but also for retouching) and Nik Color Efex Pro 4 (to add some sizzle). The computer I used is an iMac running OS X 10.9.5.

Step One: The Original Scene

This shot was taken on a foggy day on Brier Island, Nova Scotia [1]. I shot from many different angles (all horizontals, an important point), but my favorite composition is the one showing the boat in the background—at the far left. What

How many times have you looked at one of your favorite scenic photographs, admiring the mood and composition, when suddenly it dawns on you that something is missing. What, you ask yourself, can I add to this picture to make it more dramatic?

One way is to create a compos-

ite image consisting of various scene elements drawn from other shots. It doesn't have to be overly complicated. In fact, I like to keep my composites as simple as possible—without a lot of fancy footwork. Of course, that all depends on the subject matter and the visual statement you want to make. I wanted to add some birds to a quiet scene with subtle touches of Alfred Hitchcock looming in the background.

drew me to this scene in the first place was the inherent irony of the situation: A picnic table on a dock, with nothing there but a few chairs, a couple of oars, a glass mug filled with a beverage and an assortment of odds and ends—but there are no people. Perhaps they were frightened away by something, hence the untouched beverage (hint, hint).

I didn't walk out onto the dock: A sign cautioned against it (perhaps telling us



part of the story). So I took the picture from the safety of dry land, maybe 20 or 30 ft away. There are some birds in the sky but they were so indistinct as to look like vague specks, which could be mistaken for dust spots. I initially processed the Raw file in Lightroom and then I exported it to Photoshop (www.adobe.com).

The first thing I did in Photoshop was to extend the canvas upward, to make room for the birds that I'd add in later. I then had to match the tone in the sky from the original scene when filling in this new blank area. For that I used the color picker to select a sky tone and the Paint Bucket tool to fill in the open area that I'd selected with the Magic Wand tool. Then I cleaned up the borderline with the Cloning and Healing tools.

Step Two: Find Elements That Make A Visual Statement

I also photographed some seagulls flying in the foggy sky over the island [2], [3], [4]. Fortunately, many of these shots were taken with the birds set against that drab, gray background. That meant I wouldn't have to deal with any complicated background textures to work around. I selected the cleanest and most detailed shots of the birds for my "protagonists." Finally, I selected a shot of a flock flying at some distance—so they appeared in silhouette. I would use that group shot to

illustrate the scale and depth of the final image.

Step Three: Creating A Credible Composite

Given the uniformly toned backdrop, it was easy to use the Magic Wand tool in the space surrounding each bird to select the backdrop and then I inverted the selection—so I could easily extract the birds from the two shots [5]. Next, I dropped each bird into position.

In each case, I went into Levels and primarily pulled back on the Output slider so that the tones would become more hazy (more so with increasing distance from the camera) to indicate that the birds were enveloped in the varying levels of fog. (Actually, the original images featured fog-enshrouded birds, but I'd decided to bring out the details and work backward, adjusting each tonality to my liking.) I flopped one of the gulls and transformed each a little bit (to relative scale), adjusting the angle and position of the foreground bird on the right relative to the horizon/frame so it would appear to be coming into the shot in a menacing fashion.

For the group shot, I used the rectangular Marquee tool to extract the birds. I then added the shot (blending it in) and rescaled it to fit. It felt as if there was too much of a gap between the larger birds and the shadowy group. So I next took a second copy of the foreground bird on

the left and transformed it, with a Levels adjustment, and placed it in the middle ground. Finally, I cropped a little off the top, which included removing the uppermost bird from the flock. I thought it was done, but I got the idea to take the shot even further.

Step Four: Adding A Touch Of Pizzazz

Even with the birds seemingly menacing the scene, the shot still looked too sedate. I wanted to add even more sizzle in order to convey the impression of impending doom and adding strong colors would do that for me. So I edited a copy of the Lightroom-adjusted file in Color Efex Pro (www.google.com/nikcollection/) and added several filters, primarily custom bi-color filters with the addition of Control Points (on selected spots) for local control. I found that I still wasn't quite happy with this result, so I used Lightroom's Graduated Filter and Adjustment brush to add a bit more sparkle [6]. Having achieved my vision, the final result is the piece I titled "Unwelcome Visitors." ■

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TAKE BACK THE NIGHT!

An introduction to light painting and light drawing

Text and photos by MATT STOCK

By its very definition, light is essential to photography. If you break down the word photography to its etymological roots you find that the word literally translates into photo (light) and graphy (writing). Light is the ink of photography. Yet very few photo enthusiasts have ever heard the terms “light painting” or “light drawing.” This process goes back nearly to the creation of photography itself and while its origin lies in utilitarian functions (as with many photographic techniques) it has evolved over the decades. Today, light painting as a category has come to represent some of the most versatile techniques a photographer can have in their repertoire, because it is relatively easy to implement but represents a fundamental shift in one’s approach to the craft. Regardless of genre (nature, portraits, fashion, food, or architecture), it all begins with a flashlight. The power to manipulate and direct light is not something you need to spend a fortune to wield. Literally any flashlight will suffice. You carry in your pocket a powerful tool for creating breathtaking light painting images and you may not even be aware of it—your smart phone. Have you ever thought of your phone as a tool rather than a stand-alone camera system that you could use with your DSLR to enhance your images? Lighting tools and light modifiers are all around us!

Not only are the lights represented here [1] friendly to your pocketbook, but the lighting of the strobe and flashlights was created with an iPhone 5 as a light source and a free flashlight app! The photo represents what light painting (and light drawing) tools can be found in my general kit for the night: one or more Yongnuo Pro LED light panels (www.yongnuoyn.com), a Nikon SB910 flash, and a variety of flashlights of different intensities.

This is a practical introduction to light painting and drawing. All of the images were captured by myself or with one assistant and were taken with a sin-

gle exposure of 30 seconds or multiple exposures combined (also of no longer than 30 seconds) to demonstrate what is attainable with a modicum of equipment. Having an assistant is easier when shooting in the dark so bribe your friends into helping you. To begin light painting and drawing you will need: a sturdy tripod, plenty of room on your capture card, extra batteries (or at least one fully charged battery),

a remote shutter release (useful but not necessary), knowledge of your camera’s timer function, and your light painting source. It is important to separate darkness from nighttime because light painting and drawing can transform any dark space into a blank canvas whether you are under the stars of a Polynesian island devoid of light pollution, or your mom’s downstairs bathroom; any dark space is the perfect place to light paint.

In light painting, one uses a light source to illuminate the subject while moving the light in a back/forth (or up/down) motion in the same manner a painter would use to paint a wall—hence the term “painting with light” [2]. Light drawing is when you intentionally introduce light into the lens thus creating a pattern of bright light in the frame. This pattern can be anything you can think of [3]. If you are fortunate enough to possess the skill of illustration you can literally create figures out of thin air. In 1949, *Life* photographer Gjon Mili visited



1



2



the studio of Pablo Picasso and introduced Picasso to the idea of drawing with light. Picasso was so taken with the idea that he created 30 light drawings with Mili. The creation of light drawing is something that is both art and science. Science in the form of experimentation and the end result is art. There are many variables that will determine your overall exposure when creating light drawings and paintings but here are some basic guidelines to get you started.

Photographing anywhere dark necessitates scouting ahead of time—in person or virtually using Google Earth (www.google.com/earth/), Google Maps (www.google.com/maps/), or an equivalent. This is true for many reasons not the least of which is safety but also because environments change dramatically when things get dark. Even mom's downstairs bathroom will look different when you turn the light off and are holding the only light source in the room. As the orientation of the shadows and highlights change, your depth perception changes and even the color temperature will change based on the color temperature of the light you are using. The same concept applies to any outdoor shooting environment. Once the sun sets, your brain has a hard time recognizing even familiar locations because of the visual conditions but also because the ambient light (if any exists) is dim and of a different color temperature than the sun. That 1000 lumen light may be able to light up a bird a quarter mile away but it will also drastically change how the environment looks while you are hiking back to a location you scouted in the daytime. My recommendation: use biodegradable trail marking tape to help find your way for safety sake. They can be purchased in bright colors and are environmentally

friendly day or night.

Darkness is very big so start small. Let's return to image [1] and discuss traditional light painting. That image was captured in a windowless room with white walls and all of the lights turned off save the beams coming out of the flashlights and the light from my iPhone used to light paint. Even though the image is of a small scene, it took a large amount of planning to execute. Light painting (like regular painting) will yield the best results when you determine what color and intensity of paint you wish to use ahead of time.

That means composing the subjects, planning the light painting moves, and determining the exposure times in advance. I took several practice exposures and determined that I would have enough time to light each flashlight moving back and forth with the

following settings on my DSLR: ISO 400, f/10 at 24 seconds. Image [4] provides a diagram showing the placement and direction of the light painting used to create the final photo. Remember, for this image I wanted to create highlights on the flashlights so I was careful to only aim my iPhone at the flashlights and not into the camera. Since we are adding light to an exposure it is very helpful when light painting and drawing to wear dark long sleeve and non-reflective clothing so we don't introduce any unwanted reflected light into the frame.

You can try a variety of different exposure times while on the set and achieve wildly differing results; you don't need to stick to just one exposure time the entire session. Experiment! After some practice you will be able to estimate how long you will need to walk (or move) the light source to capture the idea you have in mind. Remember that light and shadow travel in the same direction; plan your light painting moves accordingly so you don't end up with shadows where you do not want them. Since image [1] was created in a very dark room my initial exposure time is not an issue. I could have left my shutter open for 30-seconds or even longer and it would not have over exposed my frame. If you are shooting in an urban environment you are likely to encounter light pollution from the streetlights, landscape lights, or any other light sources that drown out the stars. The next series of images deals with exactly that scenario. In images [5], [6] and [7] I am set up in front of my house ready to shoot my favorite sculpted hedge at 10pm on a beautiful Florida evening. These images were captured with the exact same settings on my Nikon D800E using Auto White Balance. Image [5] represents what the scene looked like with ambient light





only. These images were processed only in Lightroom 5 using a bare minimum of digital darkroom adjustments and no retouching to show you the most accurate comparison between the images. Think of these next few images as a light painting “anti-retouching campaign.”

Because we are photographing next to a very brightly lit house (with landscaping lights illuminating the surroundings) I needed to calculate the exposure based on the internal camera meter and how much of the ambient light will bleed into the image. It is important to note that LEDs give off a cooler light

while older halogen flashlights give off a warmer glow. Neither one is better than the other, they are just two of the most common color temperatures you will encounter. I liked the contrast between the warmer light given off by the landscaping lights and the LED panels so I went with what was available.

I know from my camera’s internal metering that the exposure time should be 1.5 seconds at $f/2.8$, ISO 800 to create a properly exposed image. So I was careful not to use the flashlight on the highest setting or risk blowing out all of the details. Our limiting factor is the

time the shutter will stay open. If my goal is to make a wave pattern in front of my lens [6], I would only have 1.5 seconds to make that happen with these settings. But the camera does not care what my shutter and aperture values are as long as the image is “properly” exposed. So I can play with the settings! Light drawing entails walking, running (or otherwise) moving in front of the camera while the shutter is open so the longer you can possibly keep the shutter open the more area you will be able to cover. I am not a fast walker, I know it will take 30 seconds to walk from edge to edge of the shot so I can set my camera to 30 seconds and then I need to adjust the aperture value. A change in exposure from 1.5 seconds to 30 seconds means that I am letting in approximately 3 stops more light with my shutter so to balance the exposure I need to let in 3 stops less light with my aperture moving it from $f/2.8$ to $f/9.5$. When creating light drawing the timer feature on your camera is your friend. Set the timer to whatever length of time you will need to get into position to begin drawing. If the camera begins to expose and you are not in the position you want to be in two things will happen:

1. You now have less time to light paint.
2. You may get unwanted light graffiti in the frame.

Fortunately you are working with a DSLR (or a mirrorless digital camera), not working on film and since you have plenty of room on your capture card you can shoot away! Having a remote shutter release cable simplifies the process exponentially and you can already be in position ready to light paint before triggering the camera. Image [7] demonstrates how light painting can subtly add light to a frame and highlight the areas you wish to accentuate. Here I wanted to light the sea grape hedge from a high side lighting position on the left and also on the right side of the frame. I held the light on the left for 13 seconds and on the right side for 11 seconds. The discrepancy in the timing is due to the time necessary to run from one location to the next. You can see how much of a difference two seconds can make so planning and practice is your friend. Image [7] was captured solo and you do not see me in the frame at all. Why? I made sure to stand out of the frame on both sides when light painting but most importantly I hid my light from the frame when moving from one location to the next and I made sure to run behind the camera—not in front of it.

Very long exposures will drain your battery significantly faster than normal daytime shooting with shorter shutter speeds so in the beginning I would recommend turning off the noise reduction function in your camera as it also reduces

battery life. Since you are shooting somewhere dark you are going to need to increase your ISO significantly. Camera models vary widely in their ability to produce a useable image at a high ISO within a single brand and also from year to year. I shoot with a Nikon D800E and can produce 40x60 inch light painting prints shot at ISO 3200 [8] that look pretty darn good still but the best way to determine the best ISO for you is to experiment. Somewhere between ISO 800 and 4000 should be a good starting point for light painting. You need to set your camera to manual focus. You can pre-focus on your subject but when the time comes to pull the trigger, it has to be in manual. Autofocus tends to be temperamental when working in very dark shooting scenarios over time especially with a remote shutter release. But be careful as there is nothing more frustrating than spending hours on location shooting only to come back to the studio and realize that all of your images are out of focus. When in manual focus be very careful not to adjust the focus ring accidentally.

While on location embrace Murphy's Law of "anything that can go wrong will go wrong." Most stores are closed late at night and you may be in a remote location without a way to obtain extra batteries or that tripod plate you forgot at home. Semper Gumby, or always flexible, is a healthy way of staying sharp while shooting on location and not giving in to the frustrations of "what should have been." I often have idealized concepts of what I want my images to look like and sometimes I can capture them right away, sometimes they take years, and sometimes they never happen. But embracing



flexibility allows you to be open to the opportunities all around you. Tree of Life, [9] is the poster child of embracing the Semper Gumby philosophy. After spending many successful hours capturing images from an airboat in the swamps of Central Florida my light painting sources began to die one by one. I was saving Tree of Life, the image that I felt had the most potential, for the last shot but by the time we got there the tides were such that I could not get close enough to use what remained of the power in my flashlights. It dawned on me that I while my light painting tools were out of power, the headlights on the airboat were incredibly powerful (5000 lumens). We beached the airboat in position and positioned the headlight. Because of its power, it created a hotspot on the tree but I was flexible in embracing the idea of using a novel light source and including the hotspot into the finished work. If I had

not been mentally limber it would have been easy to draw the conclusion that my light drawing and painting tools are not working so we should just pack up for the evening. In the end, Tree of Life became all I hoped it would be.

Pablo Picasso was flexible in his thinking about light drawing and soon became enchanted with the notion of being able to draw in the air with a long exposure. This concept has long held my fascination as well. I wish to draw in the air at a slightly higher altitude. As unmanned aerial vehicles (UAVs) become more powerful and more ubiquitous, photo enthusiasts will embrace and adapt that technology to suit their needs. By attaching a light source to a UAV and using the navigation lights already present, I am able to remotely paint and draw with light simultaneously. While the light drawing seen here [10] is pure abstraction and may not be elevated to the same genius that Picasso was able to create with Gjon Mili, it still represents his playful spirit of experimentation and the notion as he put it that "everything you can imagine is real." This article is a stepping-stone down the path to the creative potential that exists when you shut off the lights and open your eyes.

The nighttime is magical, full of wonder and I hope you will realize that when the sun sets, it does not mean "darkness is coming" in the literary and metaphorical sense of something dark and foreboding. It means that world is about to be reborn. Marcel Proust says, "The real voyage of discovery consists not in seeking new landscapes but in having new eyes." Why do we put the so-called golden hour on a pedestal? Why put your camera away when the sun goes down? Is there a rule that you cannot take any more pictures after sunset? Will your camera break if you use it in the dark? I say it is time that we rally together to take back the night! ■



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HOW TO FREEZE ACTION WITH STROBES

Using light to stop time to create spectacular shots

Text and photos by CHUCK GLOMAN

[1] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/8, shutter speed 1/200th, ISO 100, color temperature 6600°K. Jamie and Mel reach new heights after carefully planning their movement. This image reveals that it takes just as much talent (or luck) on the subject's part as the photographer's.



[2] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/2.8, shutter speed 1/200th, ISO 2500, color temperature 3900°K. A rehearsal image that illustrates that the lack of strobes causes blurring in the dancer's movement. The clarity isn't as sharp because of the higher ISO and a wide-open F-stop.



[3] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/8, shutter speed 1/100th, ISO 100, color temperature 6350°K. This behind the scenes image shows our second set up as the class prepared for the shoot. The Photogenic strobes were triggered from my camera.

When we want to freeze the action, most photographers increase the shutter speed. The major drawback to this method is that you also increase your need for light. Using strobe lighting to stop the action will accomplish the same thing but without creating a huge appetite for light.

We have all seen the classic images where water droplets appear to be frozen in time. Using the same principle with strobe lighting, your camera's shutter speed is much lower—usual-

ly 1/60th to 1/200th of a second. Because the F-stop controls the depth-of-field, using strobes enables you to utilize the sweet spot of the lens (normally somewhere around f/8). The action you photograph will actually stop because the strobe lights are firing at such a high rate giving you a millisecond of bright illumination, which stops the action.

In the following examples, I'll explain the best way to stop the dancer's action midstream. All strobes will accomplish this and a wireless trigger will permit your camera to fire at the correct time without being tethered.

There are a few key elements to understand

[4] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/9, shutter speed 1/125th, ISO 100, color temperature 6350°K. Having the dancers count before they leap allows you to prepare for the moment you want the strobe to fire.





before you begin taking strobe images. The strobes should be set on the right and left sides and adjusted to the height you want. In our case, the strobe camera right was set to a height of seven feet (eight feet from the dancers) to provide a strong key at three quarters output. The strobe camera left was set at a height of three feet (at half output) to illuminate the backdrop—and very little else. Both of these FJ Westcott Strobe J Plus units (www.fjwestcott.com) were shooting into umbrellas.

TIP: With all strobes, you determine the height and placement from the subject as well as the strobe's power output.

Once the strobe lighting is ready, the next step is to plan the dancer's movement. We wanted to freeze two dancers in the air having their legs and arms cross each other. During rehearsals, one of the dancers turned her head too much and the other had her arm blocking her partner. The images were taken and analyzed during this process so the dancers would know what to do at the appropriate time. Once they both knew what was expected of them, the most difficult part was to determine when to trigger the strobes.

Having the dancers count to four, we knew they would begin their movement on number four. Counting two beats after that, we waited until the apex of their move and then we fired the strobes. After a few tries, we achieved the desired result [1], [2].

We explained to the class exactly what was expected of them and then set up an addi-

tional photography area with two Photogenic StudioMax III 320B strobes (www.photogenic.com), both set at a height of eight feet (on the left and right sides) and firing at full power. We made sure that the white backdrop was taped down as the dancers rehearsed [3], [4].

TIP: Just because you mastered the skill of counting to four, knowing when to fire the strobes during the action is vital to capturing a good image.

Wanting to illustrate what was happening with the ambient lighting, this image still freezes Jamie's movement but I needed an ISO of 5000 to get a proper exposure because my lens was wide open at f/2.8 [5].

Both the dancers and the photographer need to know what the final image will look like [6], [7]. Posing the subjects is the best way to explain what you want. A lot of preplanning must be done in order to capture the best strobe image. Although this behind the scenes shot is sharp, the actual strobe shot would be much better.

A slightly more complicated shot was rehearsed for the class and you can clearly see the wear and tear the background received [8]. We decided to keep the dancers well away from the torn, damaged end of the backdrop and shot this set up at a high ISO.

Adding some colorful falling objects into your image is as simple as having an off camera assistant toss them into the shot at the appropriate time [9]. This not only takes skill from the photographer (knowing when to fire the strobes) but

[5] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/2.8, shutter speed 1/125th, ISO 5000, color temperature 3250°K. Capturing the movement at 1/125th of a second froze the moment, but the high ISO (5000) added too much grain to the image.

[6] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/6.3, shutter speed 1/100th, ISO 100, color temperature 6350°K. Wanting a "still life" style image I posed dancers as shown.

[7] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/2.8, shutter speed 1/125th, ISO 5000, color temperature 3250°K. Another behind the scenes image shot at ISO 5000, which resulted in a stunning strobe image when recorded at ISO 100.

[8] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/2.8, shutter speed 1/125th, ISO 6400, color temperature 3250°K. Using an ISO this high will result in some unwanted pixelation of the image.





[9] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/3.2, shutter speed 1/400th, ISO 16,000, color temperature 3250°K. Small artificial flowers were tossed into the action requiring perfect timing on the dancer's part as well as the assistant.



[10] Canon EOS 5D Mark III, Canon 24-70mm f/2.8 lens, f/6.3, shutter speed 1/125th, ISO 100, color temperature 6350°K. Whether the subjects are moving or static, strobe lighting adds a unique quality to the image.

also the assistant (whose timing must be just as good) as well as the dancer—to freeze the best moment in time.

TIP: Even a still life image can look great if carefully posed and shot with strobes **[10]**.

The key to creating impressive strobe images (with moments frozen in time) all comes down to timing. The preparation is relatively easy, the most complicated part is knowing when to fire the strobe at the apex of the dancer's movement. The old adage still applies—practice makes great images. ■

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EXPERT GUIDE

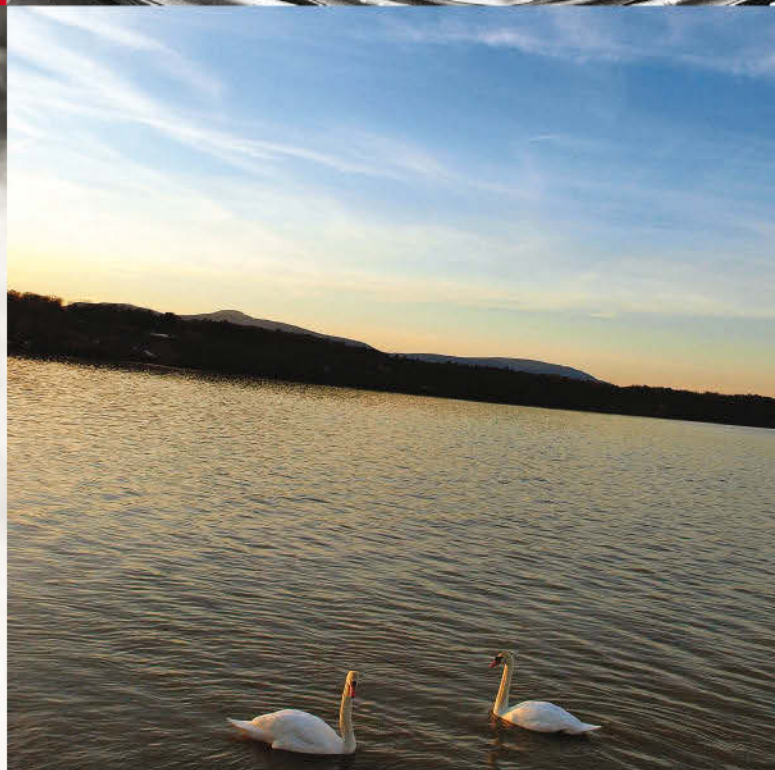
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HOW TO SHOOT 3D IMAGES FOR PRINT OR WEB

Make your images jump off the screen—literally!

Text and photos by JOE FARACE



[4] In 3D mode—a 2D mode is also available—Panasonic's Lumix DMC-3D1 captured two files. The first is a standard JPEG file as shown on top and at the bottom is a 3D .MPO file represented by a converted image. Put on your red/cyan glasses to see the bottom photograph in 3D.

[5] Because it offers so many 3D options, the interface of the Stereo Photo Maker software looks complex—the old school Windows look doesn't help much—but if you just want to take a cross platform .MPO file and turn it into a JPEG file for print or the Web you'll get the hang of it fast.

I've been a fan of 3D photography since I was a kid (when I saw the 3D film *Bwana Devil*) which immediately got me interested in making 3D still images. There are many ways you can shoot 3D photos—including using two cameras and a double cable release to trip the shutters. This kind of rig usually requires a bracket and a tripod, so shooting action shots (or even photographs of people) was as tricky as hand holding the 50-pound camera used to shoot the 3D film *Avatar*. In the 1940s, you could make 3D still images with double-lensed cameras such as the Stereo Realist or with film during the '80s with the 4-lens Nimslo.

It was inevitable there would be digital versions of these cameras and consequently we had Fuji's FinePix REAL 3D W3 **[1]** and Panasonic's Lumix DMC-3D1 **[2]**. The Lumix 3D1 even had two 25mm lenses much like the classic Stereo Realist. I always wanted to own a Realist but the Lumix 3D1 gave me the chance to shoot 3D digitally. Although the camera appears to have been discontinued, used and old stock versions are (as I write this) available from Shutterbug advertisers.

In 3D mode the Lumix 3D1 simultaneously captures two 12-megapixel images, including MPO (Multi Picture Object) and standard JPEG files. The MPO specification allows for any number of JPEG images to be saved inside an MPO file but the most common use is for stereoscopic images. The Lumix 3D1 produces good-looking images, including traditional "flat" two-dimensional photos. It can shoot at 8 fps (without auto focusing) and 4 fps (with AF) at full resolution. The 3D1 has a 3.5-inch touch screen on the back that lets you move through the camera functions and view recorded photos. Fuji's FinePix REAL 3D W3 was introduced in 2010 and appears to

be still available but I was unable to get one to shoot with for this article.

Interchangeable camera users have not been left out in the cold: When I heard Panasonic offered a 3D lens for their mirrorless camera system—the Lumix G 12.5mm f/12—I had to get one **[3]**. It has two lenses that simultaneously record a left and right photo by using half of the sensor for each photo. The camera combines the images into a single .MPO file so you capture both images without worrying about subject movement. The drawback is that the lens is about 65mm (equivalent) and slow f/12 relegating it to outdoors use. It has been officially discontinued but I still see new ones for sale and there's always the used marketplace.

Some Olympus mirrorless cameras, especially the SZ series, have a 3D mode that lets you make two separate images and combine them in-camera. After you make the first shot, a see-through version of that image remains on the LCD while you align



SOURCES OF INEXPENSIVE 3D GLASSES

3D Stereo.com: www.3dstereo.com

American Paper Optics:

www.3dglasseonline.com

Berezin Stereo Photography Products:

www.berezin.com/3d/

Plastic 3D Glasses: www.amazon.com

Rainbow Symphony:

www.rainbowsymphony.com

Ultimate 3D Heaven:

www.ultimate3dheaven.com



the second shot. The camera then automatically trips the shutter when it decides the images can be combined to create a single .MPO file.

TIP: For the best 3D effect the two photos should be about 3-5 inches apart and the camera must be as level as possible. The benefit to this technique is that it lets you use different focal length lenses. The drawback is that the subject must stay still since the photos are taken at slightly different times [4].

Viewing Techniques

The easiest way to view 3D pictures is to plug one of the cameras into a 3D TV using an HDMI cable. The .MPO files from either of the Panasonic options can only be viewed in 3D on a Panasonic 3D TV but wouldn't display on my Samsung 3D TV. On Panasonic 3D TV's you can also plug the SD card into the slot and use the built-in viewer. If you don't have a 3D TV yet you can download the free Stereo Photo Maker (<http://stereo.jpn.org/eng/stphmkr>) for Windows computers—I run it using Windows 7 on an iMac using Apple's Boot Camp or you can use any other Mac OS utility that offers dual-boot capability. There are also Mac OS, Windows and Linux shareware programs such

as Stereomerge (www.stereomerge.com) and Anaglyph Workshop (<http://tabberer.com/sandyknoll/more/3dmaker/anaglyph-software.html>). GoPro's Cineform's Neo3D also supports Fuji's 3D video format.

None of these programs are what you might call “easy to navigate” but Stereo Photo Maker seems to work the best for me, and it's free [5], [6], [7]. There are also lots of tutorials on-line about how to use Stereo Photo Maker. The software lets you to open an .MPO file and extract left and right JPEG files. You can then save them as a stereo anaglyphic file that can be viewed on your computer with red/cyan 3D glasses that are available from Amazon.com (or any of the suppliers mentioned in “Sources of Inexpensive 3D Glasses,” including clip-ons for eyeglass wearers).

The techniques for a good 3D shot are slightly different than that of traditional still photography—you need to make sure there is strong foreground, background and middle ground otherwise the resulting image can look flat. Depending on your point of view, 3D photography—and 3D movies—is either a trend or a fad but that doesn't mean you can't have fun making photographs that have more depth. I like 3D because it fun to shoot and view these kinds of images. Give it a try, you might enjoy it too! ■

[6] This pairing of full-size car and pedal car Woodies was shot with a Panasonic 3D1 camera at a car show in Old Colorado City. Tip: This kind of image is ideal for 3D because of the inherent depth in the composition.

[7] Two lenses on the Panasonic 3D1 camera means that you have twice the opportunity for lens flare and there's no way to mount a lens hood but I could have used my hand to shield the lenses—my bad. I still like the photo because the best part of 3D photography is that it's fun and shooting car shows in 3D is lots of fun for me.

ACKNOWLEDGEMENTS: I WOULD LIKE TO THANK PANASONIC'S MARK TOAL FOR HIS KIND AND TECHNICAL ASSISTANCE IN THE PREPARATION OF THIS ARTICLE.





HOW TO USE A MACRO LENS FOR PORTRAITS

Close-up lenses are for people too, not just bugs! *Text and photos by JOE FARACE*



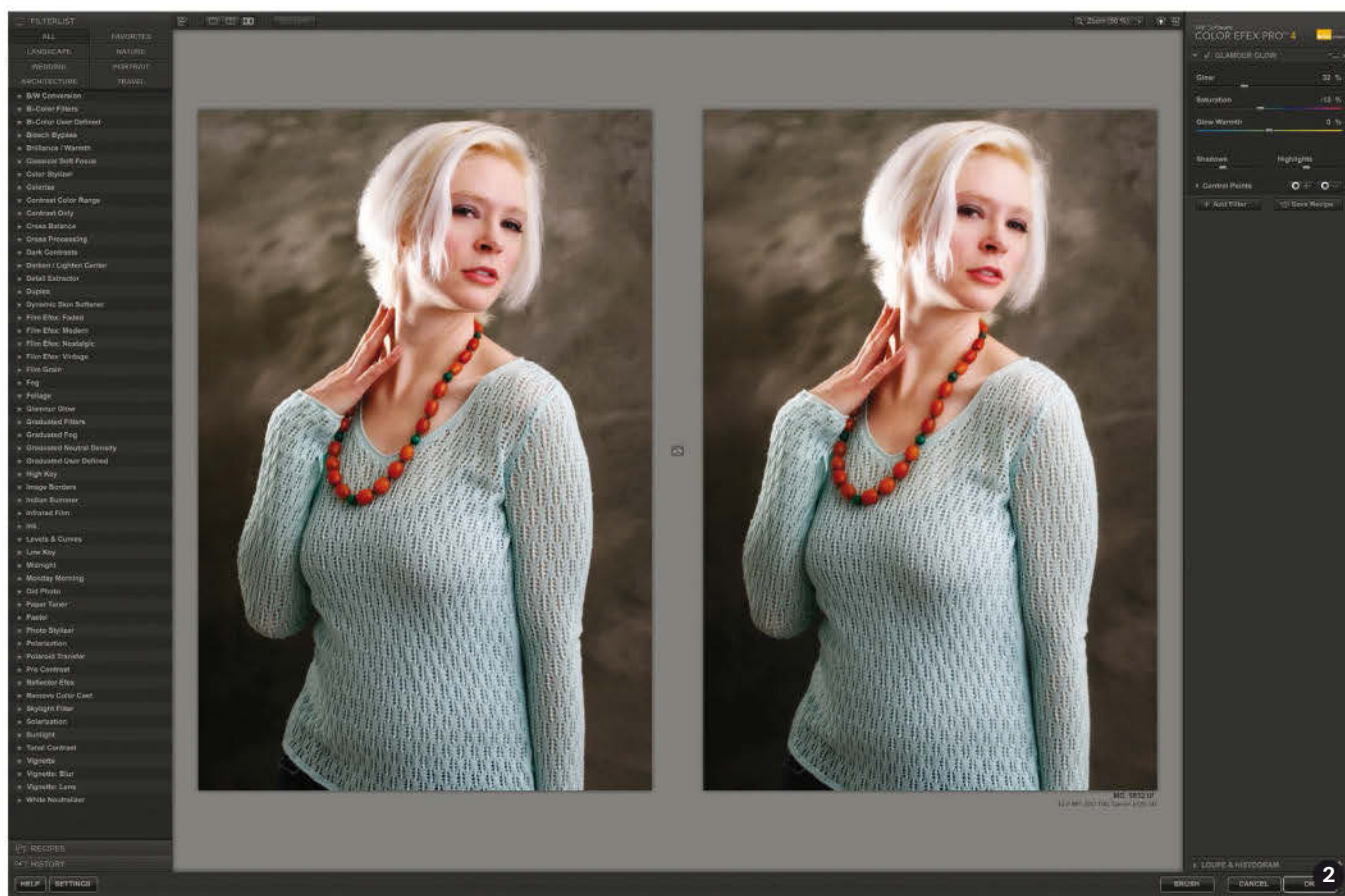
[1] How much difference does 10mm in focal length really make? That's a question I'm often asked. So at the end of a session with Pamela Simpson, I set a Canon EOS 5D Mark I on a tripod and made the first shot (left) using the EF 100mm f/2.8 Macro USM lens with an exposure of 1/125 sec at f/10 and ISO 100. Without moving the tripod, I made another exposure (same exposure) with the Tamron's 90mm f/2.8 Di VC USD lens and a difference in both the perspective and angle-of-view is immediately apparent. Yes, it's just a little 10mm and if you have enough

It's hard to get two photographers to agree on anything but if you ask, most will say the ideal portrait lens has a focal length of 85-135mm—and for good reason. For a head and shoulders portrait, the field-of-view of lenses in the 85-135mm range provides a flattening perspective.

Wider-angle lenses get you closer to the subject but can produce distortion, while longer lenses produce dramatic and flattering results but require more space in which to shoot. It seems that 85-135mm really is the ideal solution.

Macro lenses in the 90-100mm range are useful for close-up work because their longer (than normal) focal lengths prevent you from getting too close to your tiny subjects while maintaining sufficient distance for adequate lighting—keeping your shadow out of the picture—while maintaining subject size.

Almost everybody who makes lenses for macro photography also makes versions for portraiture but it's the point at which these lens types intersect that's interesting because owning a 90-100mm macro lens amounts to having two lenses in one.



A Few Downsides

That's not to say there aren't a few downsides to the two-lenses-in-one concept. Conventional portrait lenses are relatively inexpensive because they are close to the "normal" focal length range and can be built simply. Macro lenses are not so simple in design. Traditional lenses are optimized for focus at infinity—not within the close-up range—and the best macro lenses let you focus to life-size (1:1 magnification). With few exceptions, longer focal length macro lenses are physically larger and cost more, too.

You can use longer focal length macro lenses to shoot portraits and there are just a few caveats but fortunately they're easy to overcome. Like everything else in photography, every decision involves a trade off or as Rumpelstiltskin on *Once Upon a Time* is fond of saying: "Magic comes with a price."

In this case, you should make sure that your subject can handle the extreme sharpness these lenses can produce—which shows every pore and skin defect. It's also a good idea to avoid cross lighting in the studio (or on location), which can skim a subject's face. No matter how beautiful your subject may be, this kind of lighting is just not flattering.

Keep your portrait lighting simple and soft or you can also just shoot and (as I often do) use various soft focus and diffusion software later in the digital darkroom.

TIP: If you use software to soften or diffuse a portrait, apply retouching to a separate layer so

you can vary the layer's opacity and minimize its effect making the subject's skin look more natural [1], [2].

Shooting Portraits With Macro Lenses

The first lens I tried was Panasonic's Leica DG Macro-Elmarit 45mm f/2.8 Asph Mega O.I.S lens. It is one of the exceptions to the rule of big macro lenses because (at less than 8 ounces and 2.46 inches long) it's downright tiny. The lens has 14 elements in 10 groups (1 aspherical, 1 ED element) and built-in Image Stabilization. Its minimum focusing distance of 6 inches lets you capture at a true macro 1:1 ratio. Because the 45mm focal length represents 90mm (equivalent) in 35mm format making it a great medium-length telephoto lens for portraits in the studio or on location. In the studio, the Macro-Elmarit 45mm f/2.8 turned out to be a useful tool not only when shooting with studio flash but because of the fast aperture was useful for working with lower output LED or fluorescent lighting [3], [4].

Olympus offers a M. Zuiko Digital ED 60mm f/2.8 macro lens (120mm equivalent) that contains 13 elements in 10 groups using ED, HR and E-HR glass elements to reduce chromatic aberrations. Its maximum reproduction ratio is 1:1 and focuses as close as 7.4 inches.

Canon's EF 100mm f/2.8L IS USM Macro lens is Canon's first mid-telephoto macro lens to offer Image Stabilization that works in 1:1 mode and compensates for angular and shift

space you can use your feet to change the subject to camera distance to achieve the same results. They key is those five words (if you have enough space) but now you know the difference.

[2] Portrait too sharp? One of my favorite fixes for a super crisp image is the Glamour Glow filter that's part of Google's Color Efex Pro package (www.google.com/nikcollection/) of special effects plug-ins. The best part is that the effect is automatically applied to a new layer, so you can use Photoshop's Opacity slider in the Layers palette and reduce the effect's opacity to achieve a more natural look than the effect most soft focus/diffusion filters normally apply at full strength.

Tip: Zoom in on the subject's face, start at 100 percent then back off the opacity setting until the effect almost disappears, then move it slightly forward (higher) for the best look for a particular image.



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[4] This portrait of Amanda Fairbanks was a natural for the crisp focus of the Leica DG Macro-Elmarit 45mm f/2.8 Asph Mega O.I.S. lens. Shot with a Panasonic Lumix GH4 using studio flash and an exposure of 1/125 sec at f/10 and ISO 200. The compact size, optical quality, relatively fast aperture and built-in image stabilization of this lens made it my favorite to use while working on this article.

[6] This portrait of Pamela Simpson was made with a Canon EOS 5D and EF 100mm f/2.8 Macro USM lens with an exposure of 1/125 sec at f/10 and ISO 100. The Glamour Glow filter was applied at 85 percent opacity for this particular image.

camera shake during close-up shooting. Canon claims the optical image stabilizer produces a 4-stop advantage over the previous model and (like all recent IS lenses) it has an on/off switch clearly labeled “on” and “off.” While that is not a big deal, it beats trying to decipher the abstract icons Canon previously used for this purpose. In addition to an AF on/off switch, the lens has an AF limiter switch settings of 1-1.6-ft, 1.6-ft-infinity and Full so the



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lens can focus faster under different working conditions. At almost a grand it's not cheap but only \$50 more than the Leica and at 3.06x4.84 inches and 1.38 pounds was well balanced on my EOS 5D Mark I with s BG-E4 battery grip [5], [6].

Nikon makes an AF-S VR Micro-Nikkor 105mm f/2.8G IF-ED that uses the “magical” 105mm portrait focal length. It features tried-and-true Nikon technologies such as a Silent Wave Motor and Vibration Reduction Image Stabilization and while optimized for close-up photography, it should be versatile enough for all photographic situations—including portraiture.

Lately I've been shooting with Tamron's 90mm f/2.8 Di VC USD lens, part of their Di series which means it works just as well with cameras with full-frame as with those with APS-C sized sensors, two Extra Low Dispersion and one Low Dispersion element are used to correct aberration. Like a real macro lens, its maximum magnification ratio is 1:1, allowing you to reproduce a life-size image of the subject on the image sensor. The lens is equipped with Vibration Compensation for use in low-light situations to reduce camera shake for hand-held photography. At 3x4.5 inches and 19.4 ounces, it's almost dimensionally identical to the previous version but the filter size is now 67mm—not the older version's 58mm. The lens is resistant to dust and water droplets and for you bokeh fans it has a circular aperture diaphragm with 9 blades producing smooth out-of-focus highlights. At \$749 it's less expensive than the Nikon (\$899) or Canon (\$949) options [7], [8].

Even when shooting with zoom lenses, I still tend to shoot at the longer end of any zoom lens range to minimize the possibility of even a hint of distortion. The bottom line for anyone interested in trying



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my two-for-one concept is that you can always use longer focal length macro lenses for headshots (or close-ups) of your model and these kinds of lenses are also useful when you want to separate your model from the background by using shallow depth-of-field. So the next time you're thinking about a lens for portraiture think about using one of these two-for-one lenses. ■

ACKNOWLEDGEMENTS: I WOULD LIKE TO THANK PANASONIC'S DAN UNGER AND MARK TOAL AS WELL AS TAMRON'S STACY ERRERA FOR THEIR TECHNICAL ASSISTANCE IN THE PREPARATION OF THIS ARTICLE.

[8] This monochrome portrait of Pamela Simpson was made with a Canon EOS 5D and Tamron's 90mm f/2.8 Di VC USD lens with an exposure of 1/125 sec at f/10 and ISO 100. Originally shot in color and converted to B&W using Google's Silver Efex Pro.



WHAT DOES “MACRO” REALLY MEAN?

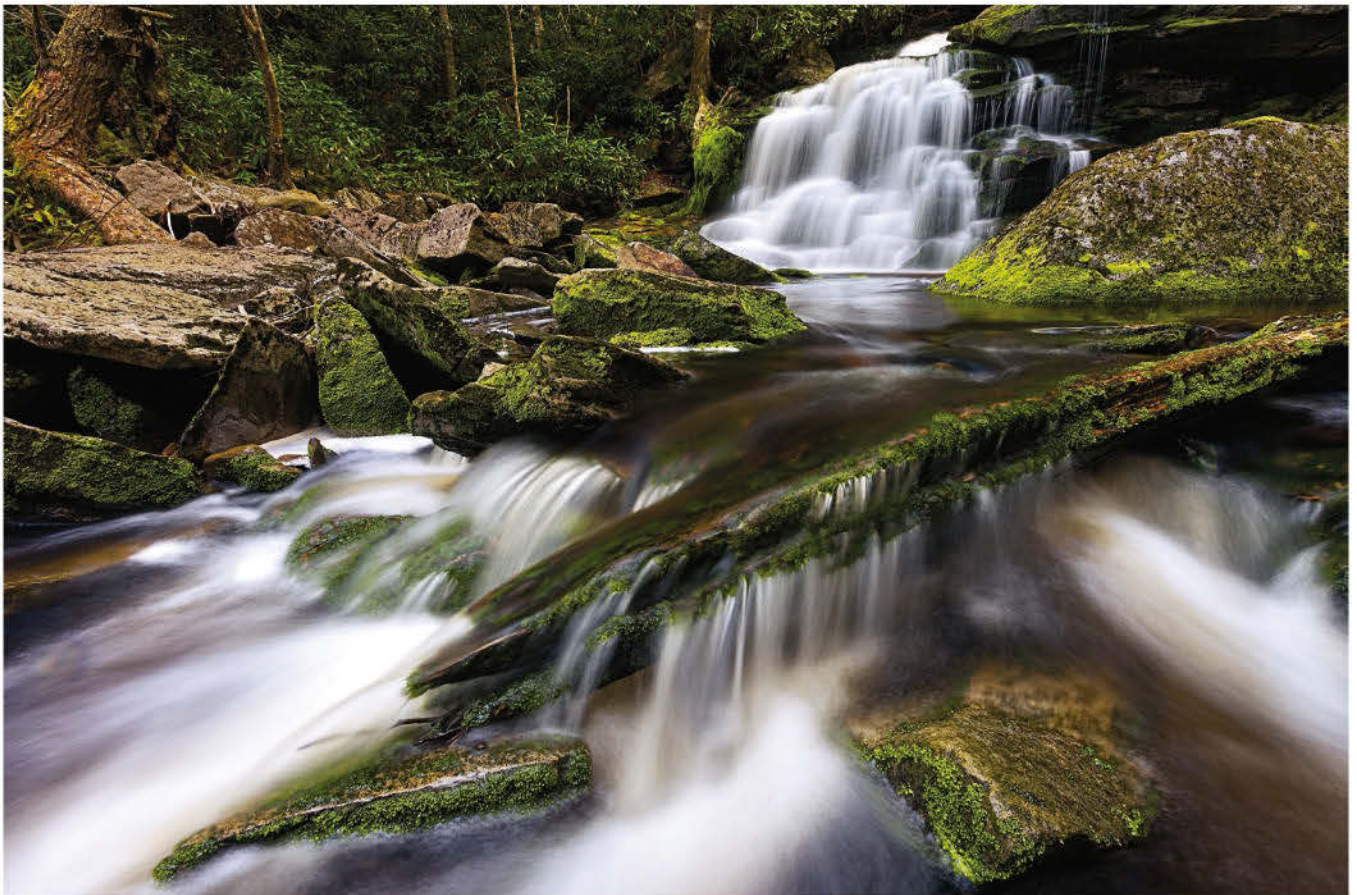
The classic definition of macro photography is that the image projected onto the digital sensor (or the film plane) should be the same size as the subject. At a 1:1 ratio, a DSLR with a full-sized chip should have the ability to produce life-size magnification and focus on an area as small as 24x36mm. Lens manufacturers sometimes describe a lens's close-focusing capabilities as “macro” even if it doesn't quite meet that definition and over time it's gradually come to mean being able to focus on a subject close enough so the image is life-size or larger when viewing a 4x6 inch print—which only requires a magnification ratio of approximately 1:4.



THE BASICS (& BEYOND) ON PHOTOGRAPHING WATERFALLS

A guide to the gear and techniques you'll need to get a gorgeous waterfall image

Text and photos by CHRIS TENNANT



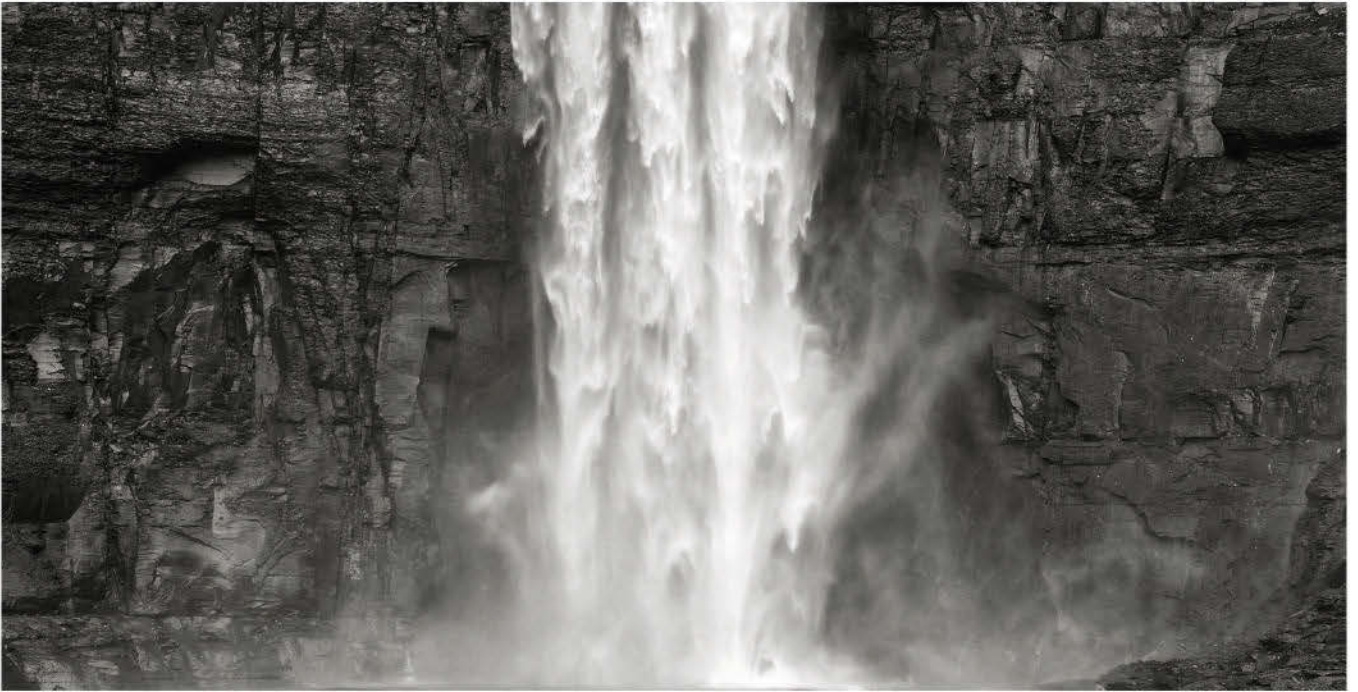
Whether it's a torrent thundering down a massive gorge or a quiet cascade deep in the forest, waterfalls attract all variety of photographers, from beginners to seasoned professionals. Waterfalls hold a special appeal that goes deeper than their photogenic qualities, invoking feelings of serenity and awe. In this article I'll provide a brief overview of the equipment you need to start photographing waterfalls, followed by a discussion of useful in-field techniques that go beyond the basics to raise your photos to a new level. Finally I'll offer some suggestions about the

all-important art of composition.

Equipment

The beauty of waterfall photography is that it is accessible to every skill level and any camera is capable of taking great images. Photographing water lends itself to the creative use of shutter speed which makes digital cameras well suited—given their ability to provide instant feedback.

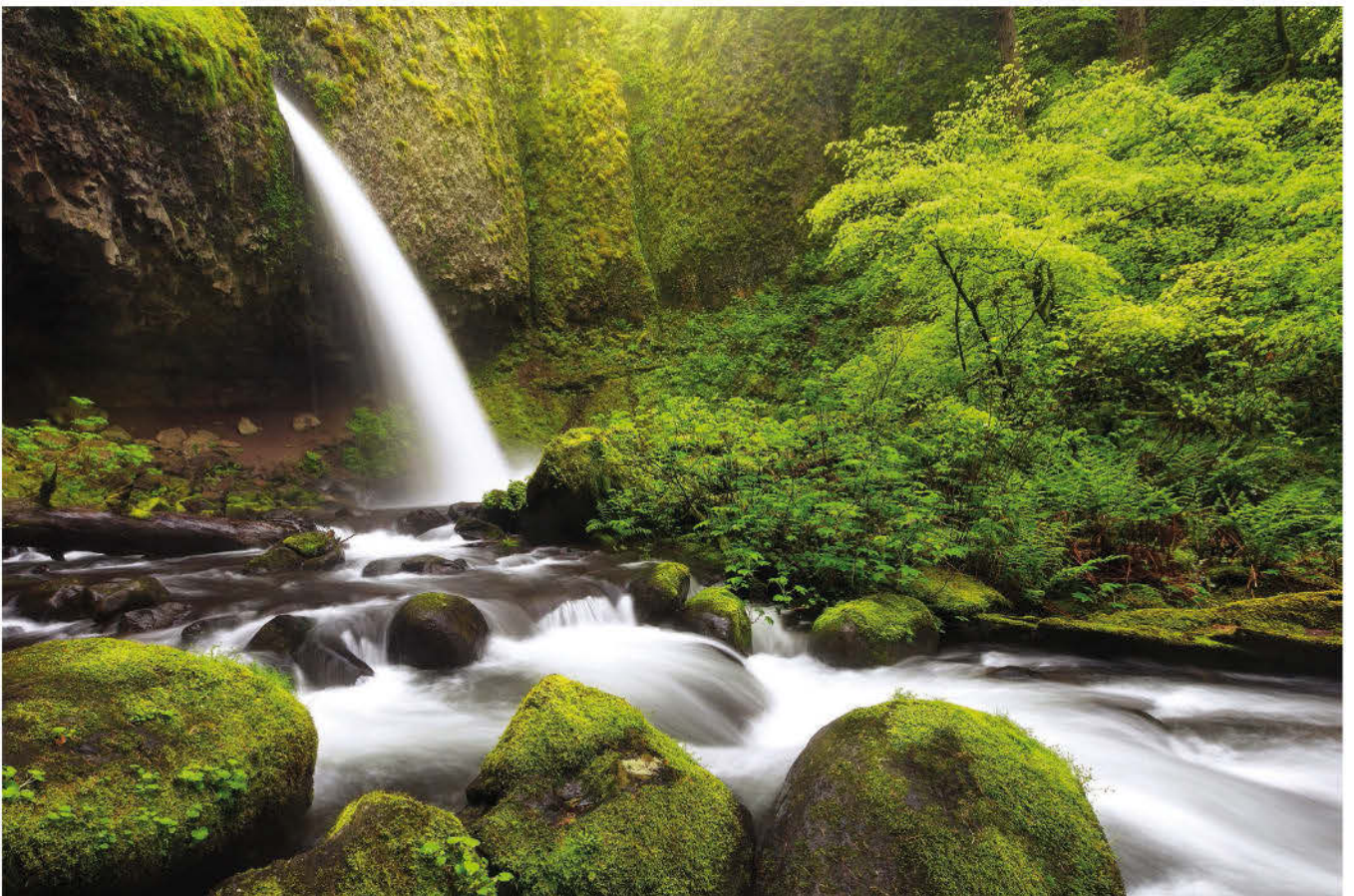
Any level of camera—from a simple point-and-shoot to an advanced DSLR—will work. If your camera has interchangeable lenses, the choice of lens to use depends on the size and type of waterfall being photographed. Smaller falls benefit by

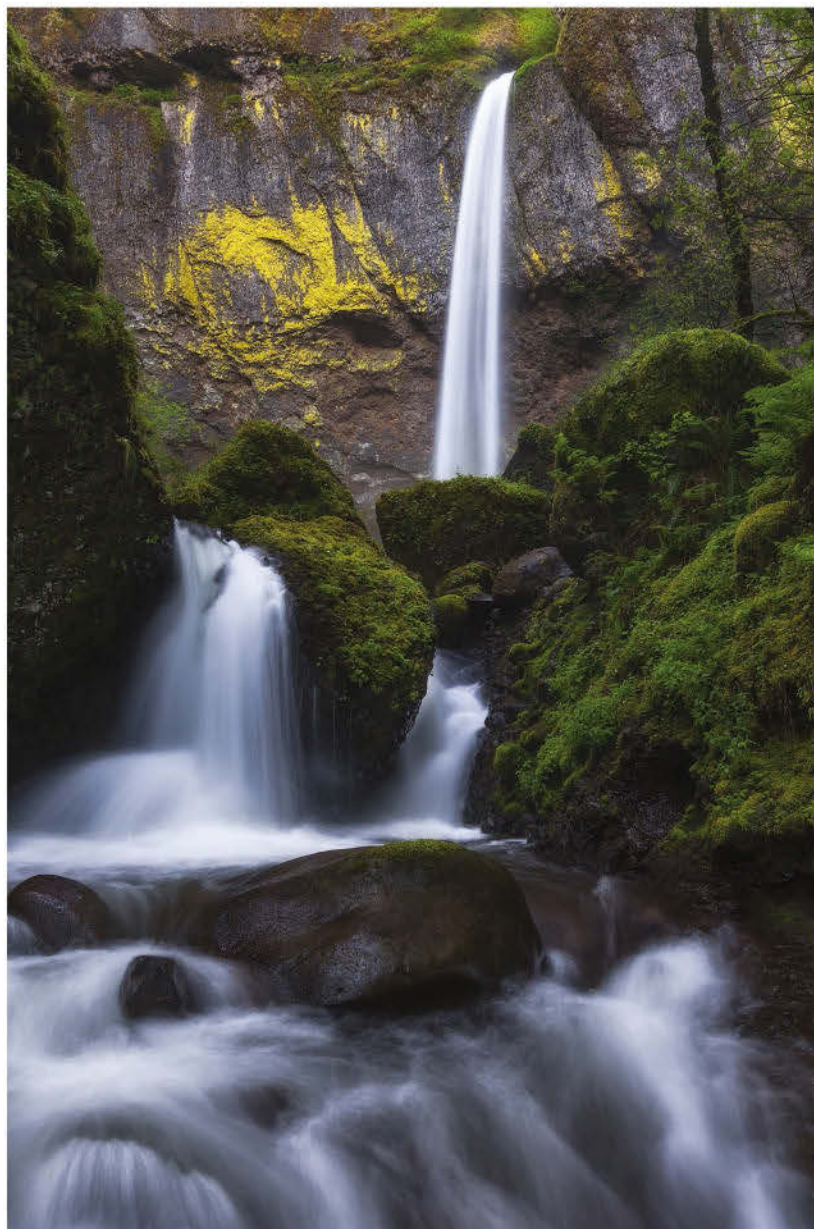


being shot with an ultra-wide angle lens. A mid-range zoom lens provides enough flexibility to capture large (in breadth or height) falls. There are times when a telephoto lens is the best option. I gravitate toward shooting wider and if given the choice of only a single lens would opt for an ultra-wide angle lens, which allows for creating unique perspectives.

Apart from the camera and lens, it's difficult to overstate

the importance of a solid tripod. The quality of your photos will only be as good as your tripod. If you place a pro DSLR (with a shutter speed of a few seconds) on a flimsy tripod, you'll understand why! The best camera and/or post-processing skills cannot save a blurry image. Be sure that the tripod feels sturdy on dry ground and can also provide a solid base in shallow water with modest currents.





Another vital piece of equipment is a circular polarizing filter. While advances in post-processing software have rendered many filters unnecessary, the effect of a polarizing filter must be done in camera. Its purpose is to minimize reflections from the water and other shiny surfaces, such as wet rocks and vegetation. By reducing specular reflections, the natural colors and details of the vegetation emerge leading to deeper and more saturated color. Circular polarizers screw onto the end of the lens and have a freely rotating outer ring that is manually adjusted to create the desired effect. This variability is important as there are times when keeping some highlights can be pleasing and other times when you want to minimize them.

Make it a point to use a neck strap when photographing waterfalls. Aside from protecting against accidental drops, having both hands free while navigating slick rocks and shallow water maximizes your safety. Investing in a pair of waders (or water shoes) is a good idea. The ability to safely and comfortably navigate in shallow water expands the possibilities for unique compositions. One final comment on equipment—do not change lenses, batteries, or memory cards while in the water! One faulty move could lead to thousands of dollars of equipment being swept away.

Bracketing Images

With so many waterfall images, what can you do to make yours stand above the rest? It's often mistaken that the better the equipment, the better the photo. Aside from a polarizing filter all you need is a way to stabilize your camera for long exposures. Where does one gain an edge then? Elevating the quality of your waterfall images requires patience, creativity and knowing some useful techniques for in-field use. Let's consider four kinds of image bracketing.

EXPOSURE BRACKETING: The popularity of High-Dynamic Range (HDR) photography has made “exposure bracketing” part of the photographer's vernacular. Whether you process those bracketed images using a dedicated algorithm in HDR software or blend them using sophisticated layer masks, the goal remains the same—to overcome the limitations of the digital sensor and extend the dynamic range of the image. Ideally you would like to shoot waterfalls under the soft, even light of an overcast sky to reduce issues with dynamic range—such as direct light onto the falls. It's always prudent to exposure bracket. While it may be the most familiar, there are times when a different kind of bracketing may be necessary. Consider bracketing shutter speed, focus and ISO.

SHUTTER SPEED BRACKETING: Depending on the volume of water, the height of the waterfall, the amount of ambient light (and personal preference), the shutter speed can range from fractions of a second to several tens of seconds. Part of the joy of waterfall photography is the immediate visual feedback and the ability to experiment. Though I like to have smooth, flowing water I also make sure to maintain some texture. Because each waterfall is unique, this requires trial and error. A more systematic approach is to bracket the shutter speed by changing the f-stop. If you shoot a base image at f/16 and 1 second, try images at f/11 and f/22 with shutter speeds of 0.5 and 2 seconds. It's amazing how adding texture to the water, even small amounts, can

transform an image. Don't become too fixated on long exposures. There are occasions when using a fast shutter speed to freeze the water is effective.

FOCUS BRACKETING: Certain compositional techniques require positioning the front element of the lens inches away from a foreground element. Even choosing an aperture for maximum depth-of-field (f/22) is not enough to keep all of the elements sharp. To overcome this limitation, use a technique known as focus bracketing. The idea is simple; take multiple exposures while moving the point of focus from the nearest foreground object to infinity. In post-processing stack the images and blend them in a way that retains only the sharp parts of each image. (Photoshop can do this automatically by invoking the Auto-Blend Layers option in the Edit menu.) The result is an image that is sharp from front to back.

ISO BRACKETING: Even with focus blending, certain waterfalls can present challenges for getting a sharp image. The difficulty is not depth-of-field, but the vegetation that is blown about. If you are shooting in overcast conditions, it can be challenging to use a sufficiently fast shutter speed to freeze the movement and still expose the scene properly. Shooting the water may have required decreasing the aperture and the ISO

to get a longer shutter speed, here the opposite is required. Increase the ISO until the shutter speed is fast enough to take a sharp exposure—even if it means shooting at a higher ISO than you are comfortable using. During digital development simply blend in the small areas where the vegetation needs to be sharp. While it is a matter of personal taste, I find it is worth the modest increase in noise in a small area of vegetation if it means producing an overall sharp image.

Composition

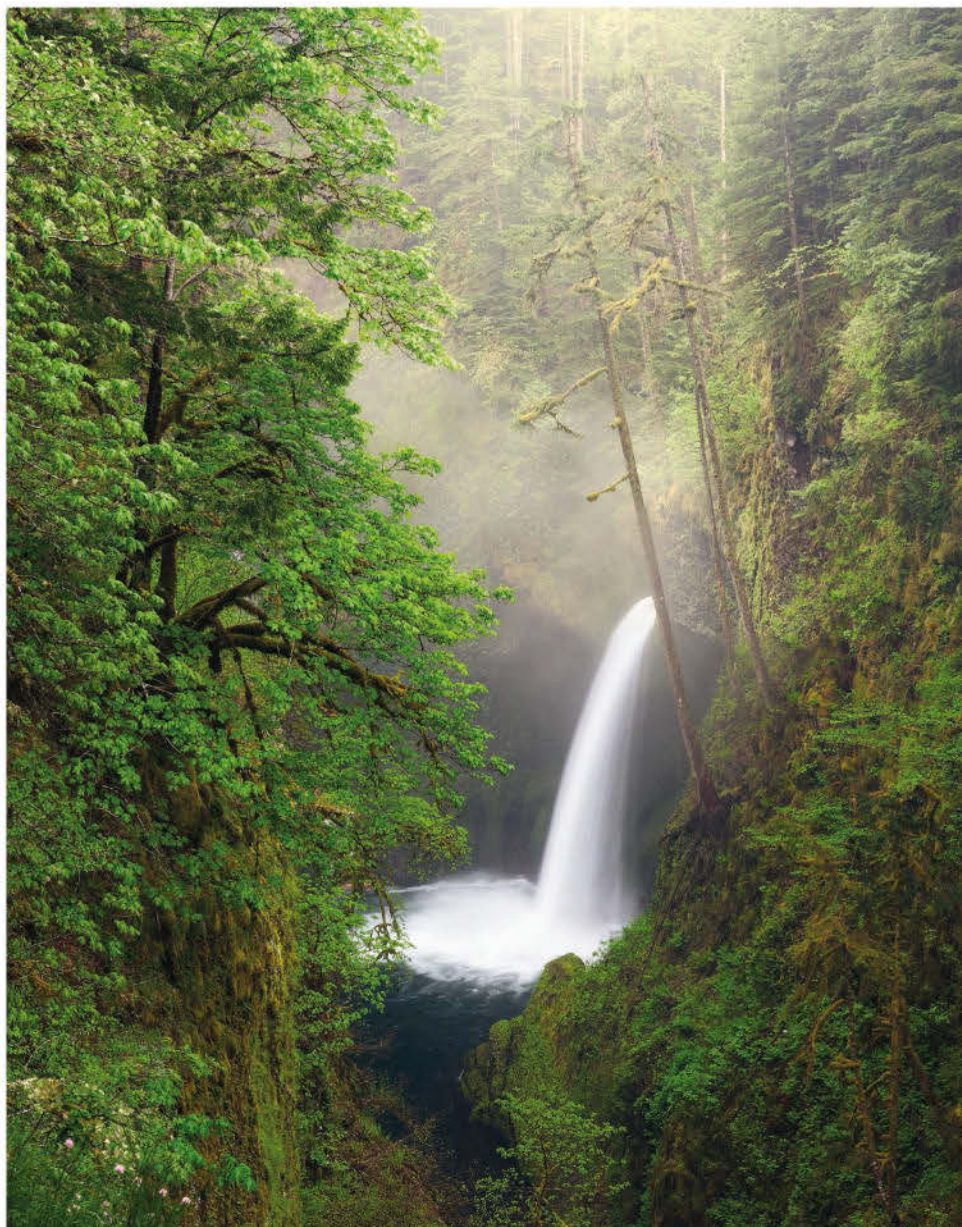
Part of the challenge for photographers is finding ways to overcome the limitation of the photograph as a two-dimensional media. Creative use of shutter speed can give the impression of passing time and careful placement of elements can create depth. Used together they work to create a dynamic photo. However the novelty of creating soft, silky water leads to uninspired, lazy compositions. Here are some suggestions to breathe life into those lackluster photos.

Don't be afraid to get in the water to create a bold (in-your-face) foreground that puts the viewer in the middle of your composition. Safety should be your number one priority, so it goes without saying this requires sound judgment.

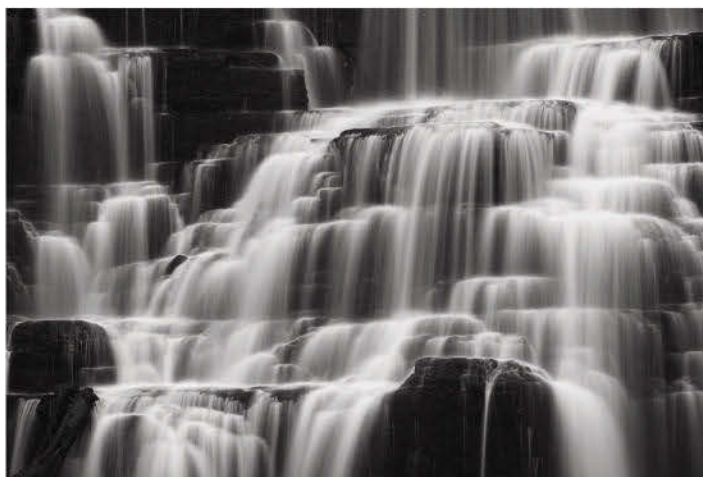
The good news is that by positioning your camera in close proximity to even tame cascades, you can produce fantastic results. You will be contending with a near constant spray of water covering the front element of your lens. Bring a lens cloth, be patient and make a lot of images! If necessary, clone out the water spots in post-processing. Always be on the lookout for foreground elements. Avoid the temptation to take the typical head on view of a waterfall while standing.

Regardless of how beautiful the waterfall is, the resulting image lacks depth and often fails to capture the attention of the viewer. There are instances when it pays to capture intimate details of a waterfall, to the exclusion of its surroundings. Isolating details and using repetitive shapes and lines can create almost abstract photos.

And please don't settle for the same composition as everyone else. Get off the beaten path—literally! Give yourself enough time to thoroughly explore the surrounding area and be creative. In many instances shooting straight on may be the easiest option. However, can you safely access a point that allows you to shoot from the side? What about a perspective from above? Some waterfalls even lend themselves to being photographed from behind! Find a vantage point that allows the viewer to become immersed in the scene in a unique and fresh way.



Get out of the rut of creating the same image as hoards of other photographers and create your own unique photo. Above all, enjoy the process! ■



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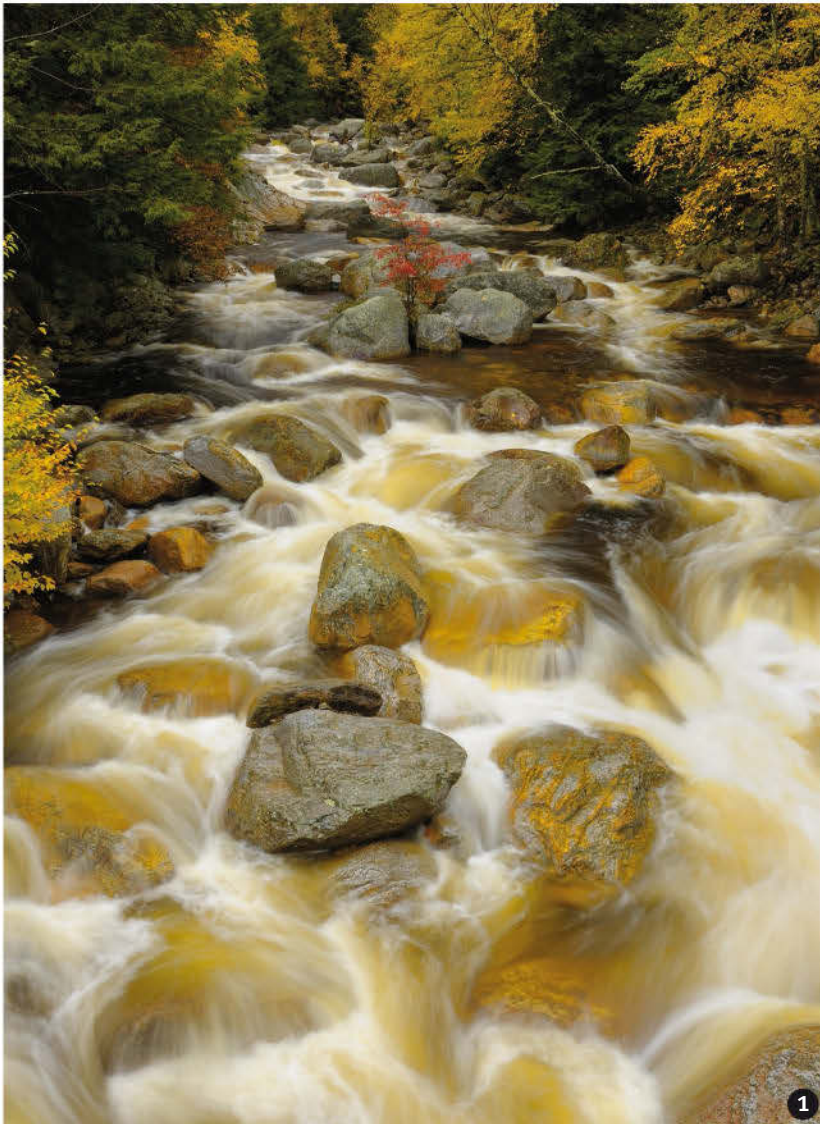
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GETTING TO KNOW YOUR DSLR

Accessing your camera's hidden gems can help you capture better photos

Text and photos by STAN TRZONIEC



[1] Taken in Vermont in the early fall, this is a great example of what is possible when you get to know your DSLR. Using a slow shutter speed, a tripod (and some luck) this turned out to be one of my favorites.

[2] For the sharpest photos, put the mirror in the up position to keep vibrations at bay. On the Nikon, one push on the cable release sets the mirror up, the next push sets off the shutter.

Getting the latest DSLR camera home is the first part of the adventure. Visions of pixel perfect images are dancing through your head, trips to faraway places are starting to come together and a new computer (and software) is on the horizon.

After unpacking the camera, it's a good idea to check the contents of the box against the inventory list. Things like cables, a bat-



tery, battery charger and a complimentary neck strap should all be there along with the factory seal. Once this is straightened out, grab the instruction book, your camera and find a quiet corner to get familiar with this equipment.

For those who can't wait, there is a quick set-up guide that allows you to get the camera ready in order to get you out taking photos within the next 15 minutes. Take a look at it and put it in your backpack for future use in the field.

Dig Deeper

Often, the accepted practice is to stay with the "quick" guide, pushing that dreaded 400-page instruction book aside for a more detailed description of a function or setting. Today's cameras are so intuitive, one mode leads into the next and within a short time, you can master the basics.

While the more common items are always covered first in the manual, I would like to go into the extra features that are sometimes hidden, forgotten or misplaced. Let's start with the body, and then dive in to the menu for some of the others.

One of the first things to look at is the Mirror Up (MUP) or Mirror Lockup that can be put to good use with extended time exposures. This feature is important when doing night, scenic images, or just when you want the camera to settle down before the shutter goes off. Used with a cable release screwed into the body, pushing it once places the mirror in the up position, pushing it again fires the shutter. To get the best of both worlds, the camera should be mounted on a tripod.



Take note of where the depth-of-field button is located. Pushing the button closes the diaphragm to view the depth-of-field in the photo, release it and the lens reopens. This is great for all kinds of photographic situations because you can instantly view the field of sharpness before pressing the shutter. The viewfinder will darken especially at the smaller f/stops (f/11, f/16, f/22) so allow your eye to adjust for a few seconds.

Be Prepared

Turn on the power and leave it alone! Most people turn the camera off after taking a photo(s), which is not necessary. Besides wear and tear on the switch, the battery will not run down and a small nudge (or push) on this button will bring the camera out of the Sleep mode and back to life. Normally the length of time the camera will be awake after the exposure averages around six seconds and opening the menu can increase this up to ten minutes (if desired).

You can move the power switch past the on position (on most cameras) to illuminate the LCD. No need to hold it—the switch has

a momentary contact and it will spring back. Pushing the shutter release will cancel the illumination, activate the focus and set the exposure.

Whether located on the pentaprism (or the confines of the outer viewfinder) there is a diopter adjustment for those with minor vision problems. Turn the camera on to see the data within the viewfinder, adjust the focus until the numbers and the screen are sharp. You can install corrective lenses over the rear viewfinder if your eyes warrant a stronger correction. This is much better than wearing glasses when using the camera on a trip or during a workshop.

On the lens, you will find plenty of information; two items are important for most shooting duties. One is the VR (or IS) setting and turning it on sets the tune for handholding possibilities in low light.

Place the switch to Normal for 90 percent of your photography—if you are in a moving vehicle and (depending on the camera brand) set the lens to Active. When shooting from a tripod, the VR is off since leaving it on will distort the final image.



[3] Sometimes photos like this need the extra effort of a mirror up position. This is a desirable addition to any camera especially when the light is fading.

[4] It is a good idea to leave the camera on for a few hours at a time. The camera will go to Sleep mode automatically, and wake up when the shutter button is pressed.

[5] When the light fades, the illuminated panel makes life easy. On most cameras, it is just a simple matter of overriding the switch to the right to turn this top panel on. It will turn off within a short period of time or turn it off by pressing the shutter release lightly.

[6] When setting up your camera, make sure the numbers are sharp in the viewfinder. When they are clear, your focus will be sharp helping you with the manual end of camera operation.





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[7] While photographing slower moving objects, pick your shutter speed to match the subject. Image stabilization compensates for camera movement, not subject movement.

[8] On today's cameras, all of the switches for lens operation are located in easy reach. When using the camera on a tripod—and unless stated by the manufacturer—the stabilization should be off so the lens is not fighting a rigid mount like the tripod.

For scenic, macro or fine art studies, manual focusing is the way to go and can be accessed via the slide switch on the lens or the camera body. Inside the viewfinder when using manual, there is an electronic range-finder and turning the lens either way will bring the image to a sharp focus (confirmed by an illuminated dot).

Raw vs. JPEG

The preferred format is a Raw file but there is much to be said for using JPEG as your major file. For speed and the ability to move larger Raw files from the buffer to the card, consider this. Since JPEG files are smaller, some cameras can shoot up to 100 JPEG's before the buffer will fill up, slowing the camera down. I like to use JPEG Fine and when processing I can format the images into a TIFF file for larger prints. JPEG's are also faster to download into your computer for proofing and processing.

With speed in mind, pros love the AF-ON button, which is located on the back of the camera. Working in conjunction with the Continuous Focusing mode, it allows you to keep a constant focus on your subject even if you let go of the shutter release. For example, if you find an osprey at rest, pushing the shutter release halfway down will lock on the bird. Moving your thumb to the AF-ON button now locks the focus on the bird in anticipation of it taking to flight. When it does, the camera will keep tracking the bird even if you move your finger off the shutter release and start taking photos again. Pro cameras come with twin AF-ON buttons—one for horizontal and one for vertical shooting.

Soon you'll have hundreds of photos on your computer but when you scan for a certain file number,



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dozens of files come up. The easy solution is not to reset the filing numbering system back to zero after each shoot or trip. Let the numbers keep running and you will never have this happen again until you pass the end of the numbering system. It might be a good idea to embed your name and/or copyright on the menu to be transferred to each photo.



[9] Using back button focus on the camera frees you from missing a shot due to the camera not keeping up with the subject. Now the shutter release is separate from all focusing duties and will never lag behind because you took your finger off the release while shooting.

[10] On most pro cameras, you have the option to take notes using the Voice Memo; one push of the button allows you to record the details of the scene as to location, weather condition or what filter used.

[11] Knowing your camera allows you to get interesting shots like this. While moving through this barn, the goat was fascinated by my

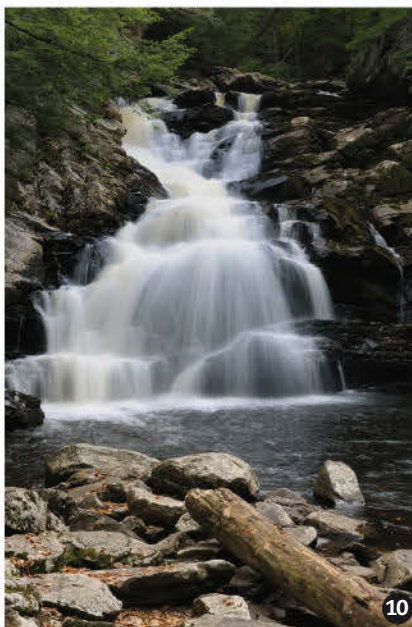
The Voice Memo feature is a godsend especially when I find myself working on my railroad photos. As the photos are taken and the engines are passing by, recording the numbers of the locomotives is faster than trying to write them down. With nature photos, locations (and other details) can be noted quickly and there are now GPS adapters that attach to the camera recording these facts within the camera database or metadata.

Other Features

Self-timers are great when you want to be in the picture, but it offers another possibility. Forget your cable release? The self-timer helps with a sharp photo. Set the camera on a solid base (a beanbag is good but a tripod is better) frame the photo, then hit the self-timer for a vibration proof image. As a factory default, most timers are set for around ten seconds but you can go longer if you wish or if you need to get into the picture.

Another bit of advice I'd offer is not to delete any images in the field. Instead, wait until you get home. Stay away from the format button until you are home and always do it in the camera, not in the computer as it may take on the operating system of your laptop and possibly corrupt your card and any updates in the camera. Do not format anything off your camera away from a place where you can't make a backup on a CD, DVD, external or a computer hard drive.

There are dozens of options when working with the menu of your camera. What I have listed here include some of the most popular and the easiest to



remember when you're shooting in the field. Now, get out that feared user's manual and start hunting for more. You will be amazed at what's inside the camera to help you become a better photographer. ■

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presence and stuck his head through the enclosure. Turning around with my camera preset for the light in the barn, I caught him giving me the eye.



STAYING COOL WHILE SHOOTING IN THE TROPICS

Getting proper exposure in difficult lighting conditions

Text and photos by CHUCK GLOMAN



1

[1] Nikon D800, 24-70mm f/2.8 lens, f/6.3, shutter speed 1/160, color temperature 5000° K, ISO 100, polarizer attached. The clouds hang low to the water, as the azure blue sky commands our full attention.

High temperatures and humidity play a key role in capturing digital images in the tropics. When traveling by air, we were once concerned about what X-rays did to our higher speed film stock but now it isn't the digital files, but the sensor that doesn't behave in high humidity.

I recently traveled to the island of Nevis in the British West Indies with a Nikon D800 (a high resolution full-frame camera) and a plethora of lenses. Nevis is beautiful anytime of the year, but in July the temperature and humidity were in the high nineties. Normally the dry sea-

son, the grass and palm trees were not as lush as in the more temperate and wet winter. The owners of the resort wanted images that would entice guests to visit in their (normally slow) summer months. I had to rely on nature, but I could help it along slightly with a little boost of color where needed.

Bring A Polarizer

Whenever you travel to someplace tropical, a circular polarizer should be part of your kit. Luckily, the assortment of lenses I took along (a 24-70mm, 70-200mm and a 300mm prime) all had the same filter size of 77mm. This would alleviate packing multiple filters. The sky would need to be in most of the shots and the deep



blue would be enhanced with a polarizer. I also packed a 50mm f/1.4 prime lens but that was for low light shooting—when I would not be using the polarizer.

The first example was an empty expanse of beach [1]. In the middle of winter this is a very crowded spot. July has its benefits in that it was too hot for most people to be by the ocean. The polarizer removes some of the reflections from the water making it appear more transparent. The agency in charge of the public relations didn't like the bits of seaweed floating in the water and strewn along the sand. This could be removed in post, but four times a day the "beach crew" removed the debris, which is later used as mulch.

Shoot In Raw And Go Manual

When capturing images in the tropics there are three things that must be done. The first is to shoot everything in Raw. With the Nikon D800 I had very large files because I captured shots in Raw (and large JPEGs). The second is "manual everything," by this I mean manual focus, F-stop, shutter speed and ISO. The only thing I leave on automatic is the color temperature—since it is usually very accurate. I almost always adjust the color temperature slightly in post. With so many reflections, contrasting images (sky and land), depth-of-field and changing lighting conditions I want total control over the captured image then I tweak it later in post. That is why I shoot everything manually (to get the best Raw image possible) knowing I may need to improve on it later.

The last one is to shoot everything vertically and horizontally. If you are working for a client (or taking images for yourself) having the option of vertical and horizontal allows more possible uses and perspectives of the shot. Often I'll



[2] Nikon D800, 24-70mm f/2.8 lens, f/5.6, shutter speed 1/320, color temperature 4500° K, ISO 100, polarizer attached. The floodlight attached to the palm tree could be removed, but this image looks better framed vertically.

[3] Nikon D800, 24-70mm f/2.8 lens, f/20, shutter speed 1/1600, color temperature 5200° K, ISO 5000, polarizer attached. Even at a high ISO, the polarizer helped to separate the distant water from the sky.

[4] Nikon D800, 24-70mm f/2.8 lens, f/6.3, shutter speed 1/160, color temperature 4800° K, ISO 100, polarizer attached. A postcard perfect scene without any digital enhancements and the only thing missing from the shot is you.

just keep one version, but I enjoy the luxury of having more than one framing choice. In this instance, the framing lends itself to a vertical image [2]. Having objects in the foreground as well as the background helps give depth to the shot. Here I have six distinct layers: the green plant in the foreground, the palm trees, the sand and seaweed, the ocean and the sky.

When you're as near the equator as Nevis is, there is no problem with depth-of-field and the view from the Great House almost goes on almost forever [3]. Shot with a very small lens opening, the polarizer helped to cut the ambient light and I did not want to add an ND9—as it would be a filter on a filter. Instead, I increased the ISO to 5000 (something I don't normally do), the shutter speed to 1/1600 of a second and at f/20, I had an extremely deep depth-of-field. I increased the Chroma slightly to make the





[5] Nikon D800, 24-70mm f/2.8 lens, f/6.3, shutter speed 1/160, color temperature 4850° K, ISO 100, polarizer attached. This is the first real sign of the dry climate in July, the palms are definitely not at their best.

[6] Nikon D800, 24-70mm f/2.8 lens, f/3.5, shutter speed 1/50, color temperature 5900° K, ISO 100. The pinks of the setting sun are far more vibrant if you manually control the camera settings.



grass greener but other than that slight adjustment, everything else was as I saw it. When shooting with any camera, I prefer setting it on “Vivid” which does increase the saturation slightly and this is an example where the extra boost did help.

Beware Of Sand And Humidity

A few more things I learned while in the tropics. First, never change a lens on the beach. I wanted a more telephoto lens so I pointed the camera down (shielding it with my body) and carefully removed the lens. This time (and ever other time I attempted this) a sea breeze blew sand on me, and the camera. Sand is very hard to remove from small places because it is so fine and it acts like sandpaper (40-grit, course). In the future I won’t change a lens near sand, I will simply return to my room and do it safely there.

The second problem is the larger the sensor, the more apt you are to see flaws caused by dust and dirt that lands on it. I was constantly cleaning (very carefully) because I was able to see that minute specks of debris on the 38-megapixel sensor and my Nikon D3 (with only 16-megapixels) might not have displayed the debris so large. Camera auto-sensor cleaners are helpful at start up and shutdown, but they do not remove everything and larger sensors appear to be dirt magnets.

Humidity is a real problem. As a human barometer, when I was dripping perspiration the camera wasn’t happy either. When we cool off by going into an air-conditioned room our glasses and camera lenses will fog up. If the lens fogs, so does the sensor but after a while the camera will acclimate to the humidity and you can begin shooting again.

Often my Nikon wouldn’t function because it was too humid in the rainforest and to solve the problem, I put the camera in a sealable plastic bag with desiccant pouches.

There is a lot of beauty in the tropics and much of it has to do with the wide variety of colors available. This cool resting spot featured a tranquil pool overlooking the ocean [4]. The colorful flowers, bright furniture, lush palms, blue sky and the tranquil pool were as inviting as a postcard. This was one of the few spots in July that was naturally green without any enhancement from me in post.

Rarely does a polarizer make an image look unnatural. In this instance the polarizer did separate the sky from the water, but it also added an unnatural darkness to the water [5]. The pool on the extreme right looked inviting, but the con-



trast between the dark seaweed on the shore and the colored layers of the ocean appeared phony. Nothing was digitally enhanced—the polarizer was just a bit too much.

Sunsets And Night Shooting

As the sun begins to set, the colors of the sky become even more pronounced [6]. The pinks, purples and magentas were backlighting the palm trees and manual settings are required, especially when

you increase your exposure, the less definition you have of the moon. In order to properly expose the moon, you need a high F-stop number and a faster shutter speed for clarity. The moon is simply a huge reflector for the sun and if the moon is correctly exposed, everything else in the shot is dark. When you open your lens for the surroundings, the moon overexposes. I believe I found a good mixture when I allowed the moon to blow out slightly, but still had a decent exposure of the palm trees, water and

the beach. The first step is to determine what the focal point of the image will be—the moonlight reflecting on the water. Since that was my exposure point, everything else could be slightly brighter (the moon) or slightly darker (the palm trees). The moonlit water resembles a painting because of the slightly longer exposure time.

If you want to slow the speed of a feeding hummingbird, you must shoot at a high shutter speed to freeze the action and still have enough light to expose the background [9]. Larger megapixel cameras give you a little more to work with in the details, but you still must be correct with the settings. Here the flowers are exposed the same as the little winged guest.

We often think that if we are comfortable our equipment is as well but that isn't really true and we have to take extra precautions to keep our cameras free of debris, sand and extremes in temperature. With a little preplanning (and total control of the manual operation of the camera) you can get exactly what you want from all of your images—and don't forget to pack some extra sunscreen. ■

CHUCK GLOMAN IS AN ASSOCIATE PROFESSOR AND CHAIR OF THE TV/FILM DEPARTMENT AT DESALES UNIVERSITY. HE MAY BE REACHED AT CHUCK.GLOMAN@DESALES.EDU.

[7] Nikon D800, 50mm f/1.4 prime lens, f/13, shutter speed 1/400, color temperature 15,000° K, ISO 320. I really pushed the color temperature in this image to give it more of an impact.

[8] Nikon D800, 50mm f/1.4 prime lens, f/1.6, shutter speed 1/40, color temperature 4100° K, ISO 4000. The almost magical look of this shot comes from the moonlight reflecting on the water—it resembles a painting.

[9] Nikon D800, 24-70mm f/2.8 lens, f/6.3, shutter speed 1/1250, color temperature 4850° K, ISO 1600. Seeing the hummingbird was difficult enough, slowing its wings was an even larger challenge.



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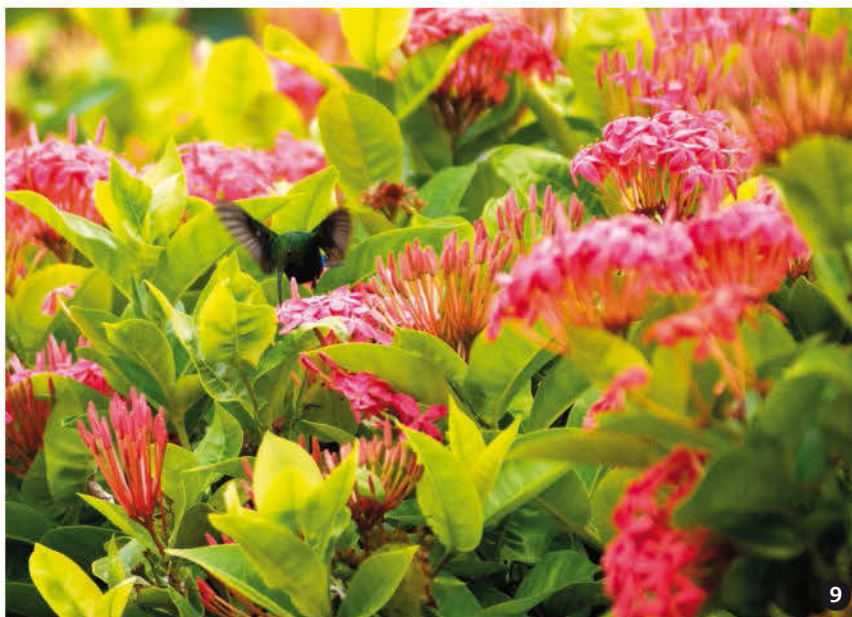


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shooting at twilight. The camera wants to open everything because the light is so low—but too much detail will be lost because we have a more sophisticated eye and better brain capacity than a camera. It is better to let the foreground go a little dark than overexposing the sky because overexposure is more difficult to correct than underexposure.

When the sun has almost disappeared from the sky, the colors are at their most vibrant [7]. Select what you want to be the focal point of the image—in this case the sky—and expose for that. It does actually look properly exposed to the human eye, but the colors were more intense when recorded digitally.

A definite exposure challenge was trying to shoot the moon and still properly expose the rest of the shot [8]. Not wanting to resort to trickery (by inserting a moon from another shot) I chose to balance the illumination of both. The more



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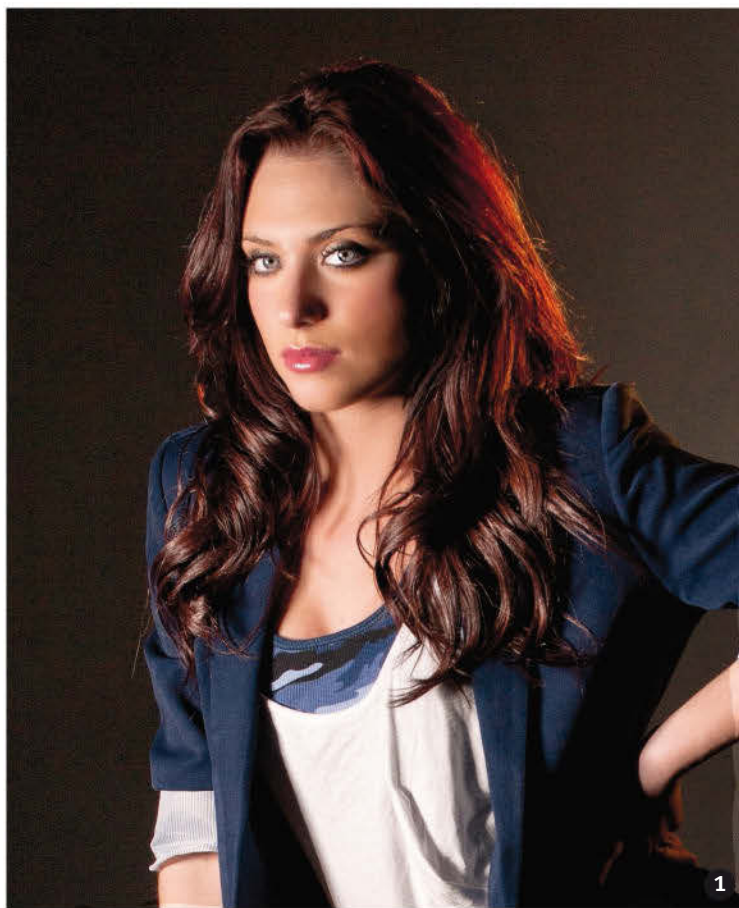
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CREATING DIRECTIONAL LIGHTING

Use a strong light source to produce powerful portraits *Text and photos by CHUCK GLOMAN*



[1] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/5.6, 1/50 shutter speed, ISO 400, color temperature 6150° K. To create a cooler look and to offset the warm tungsten hair light, the strobe fired $\frac{3}{4}$ strength. Even though the light was bounced, it was still highly directional.

Some of the most gratifying types of images are those that incorporate directional lighting. Directional lighting is when the main light source is obviously coming from one direction only—above, below, left, right, etc. This type of lighting is never flat or dull, it strongly models the subject giving him or her more definition.

In this article, I will show you some examples of how a strong light source (the sun or artificial lighting) can enhance the features of any subject to create a pleasing image.

In image **[1]**, I positioned our model Kristin in front of a dimly lit grey paper background. I used very little illumination of the background—just a Mole-Richardson 250 watt Inkie (www.mole.com)—because I wanted Kristin to be the focal point. A second Inkie was used as a back/hair light. The warm glow from the tungsten lamp illuminated her red hair just enough to separate her from the background and add a little highlight. The main source of directional lighting was a Photogenic Studio Max III strobe bounced into an umbrella (www.photogenic.com). Raised to a height of six feet and positioned six feet from the subject at camera left, we had a strong light source, although diffused.



Since the light came from camera left, her nose had a shadow on the right side. Normally, strobes travel in pairs, and if I had a strobe at camera right, that shadow may have been softened but it would no longer be directional lighting. A second strobe would also have created another twinkle in her eye. Every light source creates some

type of shadow when an object is placed in front of it. Even with soft, flat lighting, you still have shadows—they are just more difficult to see. The strong light source at camera left provided the directional lighting but still created the sparkle in her eyes.

With Kristin in a full-length shot [2], I changed the direction and increased the

[2] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/5.6, 1/200 shutter speed, ISO 200, color temperature 6150° K. A second strobe was used at full strength. The shadows are not objectionable because the strobe at camera right was bounced into an umbrella.

[3] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/5.6, 1/50 shutter speed, ISO 400, color temperature 3600° K. Switching to tungsten, the hard directional lighting created strong shadows behind Kristin.

[4] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/10, 1/200 shutter speed, ISO 200, color temperature 6150° K. Converted to B&W, using two strobes to illuminate Brittany, the telltale sign was the reflection of two lights in her eyes.

[5] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/5.6, 1/40 shutter speed, ISO 500, color temperature 4250° K. This warmer tungsten image suggested that Joanna was leaning toward a strong light source at camera left.

[6] Nikon D700, 70-200mm Nikkor f/2.8 lens, f/5.6, 1/30 shutter speed, ISO 500, color temperature 6150° K. The illumination was directional, but it was actually coming equally from both directions. Joanna had two key lights—a strong front light and an equally strong backlight.





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[7] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/9.5, 1/250 shutter speed, ISO 200, color temperature 6150° K. Three strobes were used to illuminate Katie. The two visible in the front (with umbrellas) were at one eighth power and the third (acting as a directional backlight) was at full power.

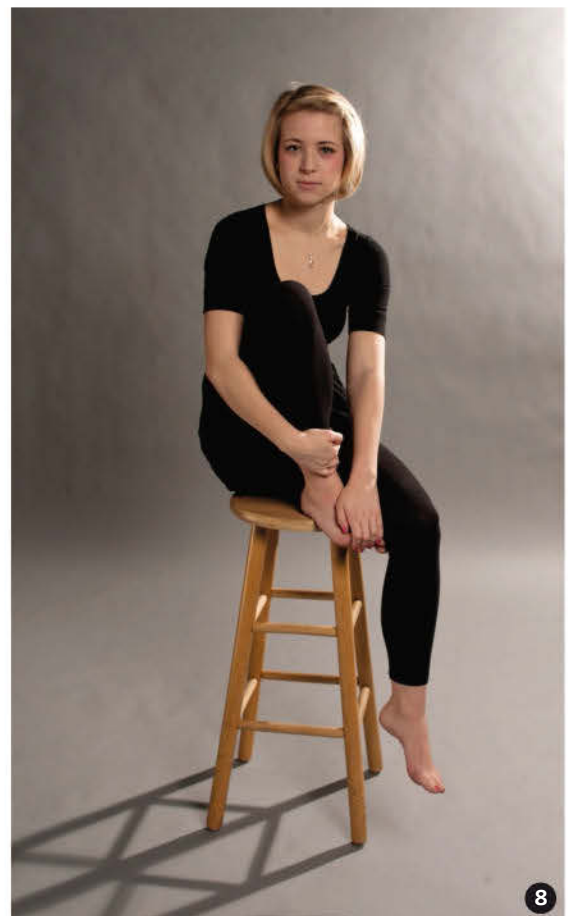
[8] Nikon D700, 24-70mm Nikkor f/2.8 lens, f/7.1, 1/160 shutter speed, ISO 400, color temperature 6600° K. Katie was strongly backlit because of the strobe pointed directly at her. Some spillage on the background and the shadow of the stool added impact.

power of the light source. This image has a different feel to it than image [1]—due to the lighting and the directionality. A second Photogenic strobe was used full strength at a height of eight-feet and placed four-feet from Kristin. This stronger source provided the directionality and looked as if it may have been sunlight coming from a high window. A strobe at camera left (placed at six and six) was reduced to half power to provide the fill and create a sparkle in her eyes. The key source was too high and having her turn her head from the source eliminated the eye reflection it would have created. The background was a light grey paper, which appeared darker because only the key light (strobe) was illuminating it.

Changing over to tungsten lighting, a Mole-Richardson 650-watt Tweenie was used as the directional source at camera right [3]. The concentric rings of the Fresnel lens softened the output slightly but Kristin still cast a strong shadow from the light source eight feet away.

Brittany had strong directional lighting coming from camera right [4]. The Photogenic strobe at camera left acted as a fill light bouncing into an umbrella and the key strobe (also bouncing into an umbrella) was four-feet from her at camera right providing highlights on that side of her face. Because Brittany's head is turned toward the light, we see both lamps reflected in her eyes. The black-and-white conversion in post added a dramatic look.

Wanting to create the look of a famous painting [5], Joanna had directional illumination



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coming from camera left as if she were leaning toward a warm light source. Our light was a Mole-Richardson 650-watt Tweenie with a sheet of tough frost diffusion placed in front of it. Since her head is turned toward the key light, that is the only light reflected in her eyes. The Inkie (the fill light) was too far away to provide anything except increasing the ambient light level.

The next example [6] created a challenging discussion with my students. This was still a directional lighting image, but which direction was the key light coming from? The correct answer is both—Joanna has two key lights. In three-point lighting you have a key (the strongest light), the fill (to fill in the shadows) and the backlight (to separate the subject from the background). The fill light is on the opposite side of the key, farther away, it is less powerful and used to fill in the shadows created by the key. If you have two lights of equal strength and equal distance on the right and left sides, you don't have a key and fill—you have two keys. Joanna's front/back lights are at exactly the same output and distance for even directional light. A black curtain was the background and it absorbed all of the ambient light, her light white blouse offset her olive skin and two Mole-Richardson 650 watt Tweenies provided the illumination.

Setting up for Katie's shoot [7], we placed her on a black paper background and utilized three

Photogenic Studio Max III Strobes—two shooting into umbrellas and a third was pointed directly at her as a backlight. This look was created to mimic a "backstage" type photo shoot where the model relaxing between shots.

In this photo of Katie [8] I used three strobes, the backlight was the strongest and was the directional source of illumination. Pointed at the background and Katie's hair, this directional backlight cast a strong shadow of the stool.

The sun provided a strong directional backlight for Jess [9] and a gold reflector acted as a fill source to bounce some ambient light onto her face. The warm colors added impact to the image.

Kelly was directionally backlit by the sun as she sat on a rock by a stream [10]. Filtered through the trees, you can still tell the directionality of the light in this image. The water acted as a natural reflector to help raise the fill light level.

It's not difficult to create a directional source of illumination. The sun is obviously the easiest source and adding a little atmosphere (dust, smoke, haze) can make any direction source more pronounced. The only side effect of directional lighting can be harsh shadows, but the model's placement in the frame can soften that. ■

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[9] Nikon D700, 70-200mm Nikkor f/2.8 lens, f/8.0, 1/125 shutter speed, ISO 250, color temperature 6000° K. Jess was lit by natural ambient daylight bounced off of a gold reflector three-feet in front of her. The autumn foliage acted as a backdrop.

[10] Nikon D700, 70-200mm Nikkor f/2.8 lens, f/8.0, 1/200 shutter speed, ISO 400, color temperature 7200° K. Kelly was backlit by filtered sunlight and received fill lighting from the water.



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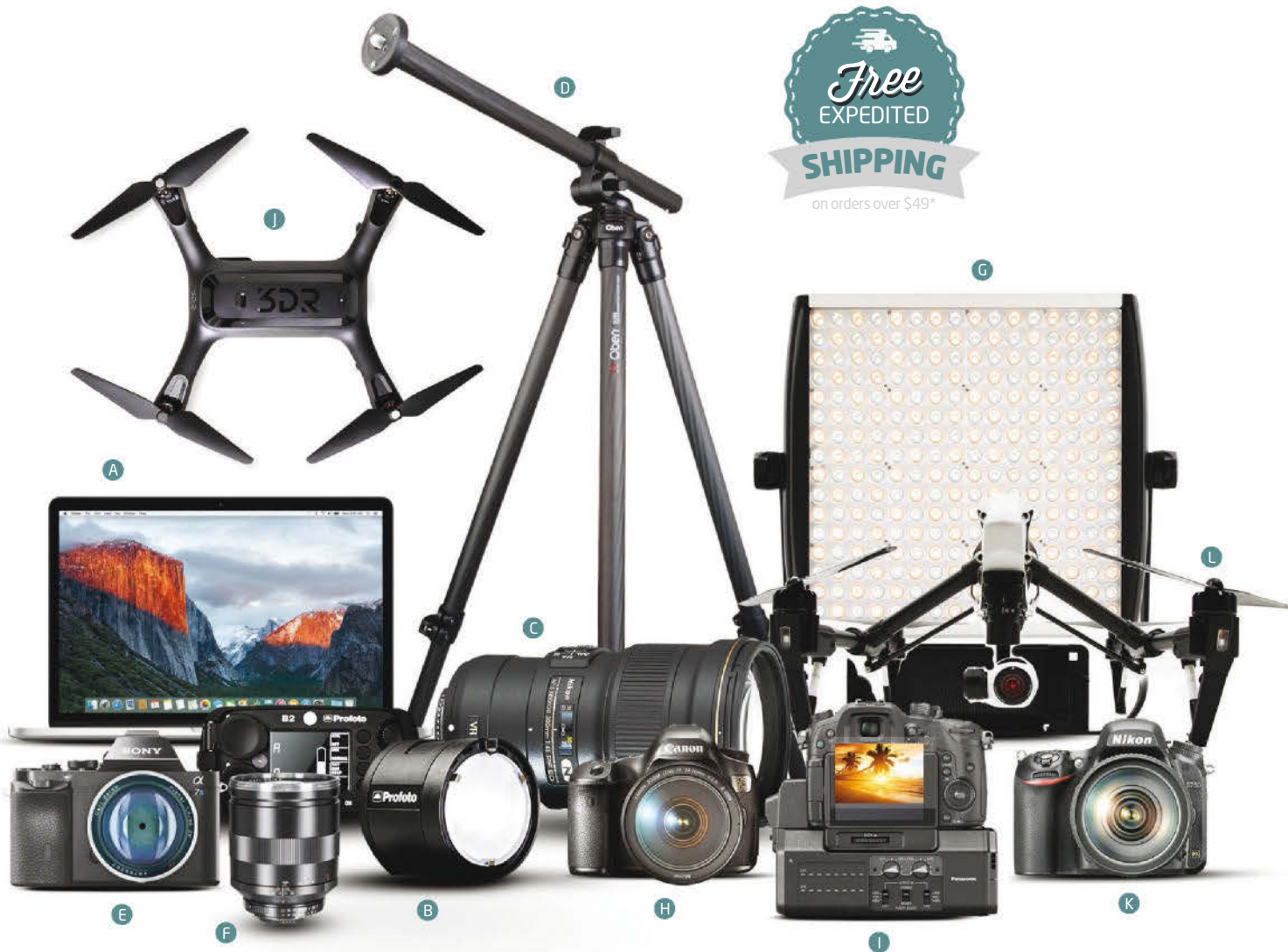
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